DOCUMENT RESUME

ED 266 539 EA 018 217

TITLE	Impact Report. December 1, 1984-November 30, 1985.
INSTITUTION	Mid-Continent Regional Educational Lab., Inc., St. Louis, MO.
SPONS AGENCY	National Inst. of Education (ED), Washington, DC.
PUB DATE	30 Nov 85
NOTE	209p.
PUB TYPE	Reports - Descriptive (141)
EDRS PRICE	MF01/PC09 Plus Postage.
DESCRIPTORS	Annual Reports; *Education Service Centers; Elementary Secondary Education; Information Centers; *Regional Laboratories; *Regional Programs
IDENTIFIERS	*Mid Continent Regional Educational Laboratory MO; National Institute of Education

ABSTRACT

This report discusses the activities of the Mid-Continent Regional Educational Laboratory (McREL) from December 1984 through November 1985 under the sponsorship of the National Institute of Education (NIE). Numbers and types of services are identified, as are numbers and types of clients receiving services from McREL. The report is presented in five sections. The first is a brief introduction, followed by a section on dissemination and technical assistance. This section reviews briefly the numbers and kinds of materials, information pieces, presentations, and training and technical assistance sessions provided by McREL during the year. The third section examines the services in the context of the following specific projects that provide the framework for service delivery: Rural Development/Rural Clusters, the Urban Education Network, the Higher Order Thinking Skills Program, Comprehensive School Mathematics Program, Effective School Program, and the Strategic Planning Program. The fourth section discusses evidence on the impact of these programs. The final section provides a chronological summary of major events over the year. The report discusses some activities conducted outside McREL's region and some projects not supported by the NIE to provide a more complete picture of the laboratory's work. The McREL region consists of Colorado, Kansas, Missouri, Nebraska, North Dakota, and South Dakota. Appended supporting materials include the following: (1) "Noteworthy," McREL's resource publication for educators; (2) "Information Technologies: Alternative Delivery Systems for Rural Schools," by Milan Wall; (3) Survey of State Leadership Groups; (4) List of Publications and Deliverables to NIE; and (5) list of Cooperative Working Agreements within the region. (PGD)

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IMPACT REPORT

December 1, 1984 - November 30, 1985

Submitted to the National Institute of Education

by

The Mid-continent Regional Educational Laboratory

November 30, 1985

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This report was prepared by the Mid-continent Regional Educational Laboratory, a not-for-profit educational laboratory. The activities reported herein were performed pursuant to a contract from the National Institute of Education, Department of Education. However, the opinions expressed herein do not necessarily reflect the position or policy of the National Institute of Education, and no official endorsement by the National Institute of Education should be inferred.

EA

McREL
Mid-Continent Regional
Educational Laboratory

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November 27, 1985

Mr. Raymond F. Wormwood
Contracts and Grants Management Division
National Institute of Education
1200 19th Street, N.W.
Washington, D.C. 20208

Dear Mr. Wormwood:

Enclosed find 10 copies of McREL's Impact Report for this year, Activity 3.2 of McREL's Research Development, Dissemination, and Evaluation Program.

If you have questions, please contact Norma Watson in Kansas City.

Sincerely,

Sharon S. Koenigs

Sharon S. Koenigs
Urban Education Project

enclosures

cc: Susan Talley
Norma Watson
C.L. Hutchins

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I. INTRODUCTION

This report discusses McREL's impact on educators and other clients over the last year. Numbers and types of services are presented as are numbers and types of clients receiving services from the Laboratory. In some cases, activities conducted outside the region are discussed. Some non-NIE activities are discussed as well, such as work conducted through the Comprehensive School Mathematics Program and the Sex Desegregation Assistance Center project. These non-NIE activities are presented here in order to provide a more complete picture of the Laboratory's work.

Section II. of this report, DISSEMINATION AND TECHNICAL ASSISTANCE, presents numerical data on the numbers and kinds of materials, information pieces, presentations, and training/technical assistance sessions provided by McREL in the last year. This section provides a general overview of impact. However, in order to capture the focused and integrated nature of the Laboratory's work, it is essential to examine the services in the context of the specific projects that provide the framework for service delivery. Section III., PROGRAM ACTIVITIES, provides a discussion of services by these projects. Section IV., IMPACT ANALYSIS, discusses additional evidence of impact and summarizes the impact data. Finally, Section V., CALENDAR OF ACTIVITIES, provides a chronological summary of major events over the year. Supporting materials are appended.

II. DISSEMINATION AND TECHNICAL ASSISTANCE

Over the past year, McREL staff have provided a verity of services to educators both within and outside the Laboratory's 7-state region. In general, these services fall into two broad categories: materials and information dissemination; and training and technical assistance. These services are provided to educators and other interested groups including:

- teachers
- administrators
- state education agency staff
- intermediate education agency staff
- staff of institutions of higher education
- school board members
- parents and community members
- other educators

From December 1, 1984 through November 30, 1985, Laboratory staff provided direct service to almost 57,000 individuals. This estimate does not include contacts made or services provided through informal networking or unscheduled meetings and exchanges. Nor does it include those benefitting from Laboratory information and services through others, such as McREL certified trainers of the Laboratory's Effective Schools Program.

A discussion of the numbers and types of services provided follows.

Materials and Information Dissemination

Materials and information dissemination activities have included the distribution of written and audio visual materials, and general presentations made at conferences and meetings of educators, school board members, and others. Over 39,000 sets of materials were distributed during the year and over 50 general presentation were made. Figure 1 illustrates the distribution of these materials by type and by state. A copy of McREL's Red Noteworthy, an example of the type of information provided, is included as Appendix A. Some of the materials are sent out to clients automatically, such as initial copies of Noteworthy. Others are distributed on the basis of client requests. The materials are in high demand in the region and are used for a wide variety of purposes including: teacher preparation courses; design and/or implementation of staff development programs; professional interest; classroom improvement; inservice training; and as awareness materials for school board members. Likewise, McREL staff are in constant demand as presenters and keynote speakers.

Training and Technical Assistance

The Laboratory provides a variety of training and technical assistance services. This year, almost 17,000 educators and community members participated in training sessions. Some of these services are targeted for special groups such as "Rural Clusters" activities and the "Urban Education Network." Other services such as training through the "Effective Schools Program", the "Higher Order Thinking Skills Program", and the "Comprehensive School Mathematics Program" are provided to any school district that elects to use them. "Strategic Planning" assistance is provided to district and state-level decision makers. Figure 2 shows the number of training/technical assistance sessions by type provided to each state in the region. Figure 3 shows the number and types of clients reached through these services. More specific descriptions of these training efforts is provided in section III. Program Activities.

Figure 1
MATERIALS/INFORMATION DISSEMINATION
12/1/84 - 11/30/85

	CO	KS	MO	NE	ND	SD	WY	OTHER	TOTAL
Green Noteworthy	115	3	16	0	0	3	106	47	290
Orange Noteworthy	25	19	30	0	0	3	86	23	186
Red Noteworthy	37	583	523	317	4	130	432	573	2,599
Publications Catalog	1	0	1	0	1	0	0	75	78
Folios (sets of 6)	735	894	345	69	0	525	142	5,181	9,891*
R&D Notes #1	344	271	262	162	103	118	111	11,629	13,000
R&D Notes #2	344	271	262	162	103	118	111	11,629	13,000
Secondary School Profiles	30	110	270	85	20	6	14	15	550
AERA Papers	4	7	6	0	0	0	0	48	65
Training Tapes	0	7	4	3	0	0	1	5	20
Other Materials	7	11	20	2	2	6	2	60	110
Presentations	15	5	13	5	1	3	2	15	59
TOTALS	1,657	2,181	1,752	805	234	912	1,007	29,300	39,848

*Includes 2,000 copies mailed to 2,000 random districts in the region as part of a needs survey

Figure 2
Training and Technical Assistance Sessions
12/1/84 - 11/30/85

	CO	KS	MO	NE	ND	SD	WY	OTHER	TOTAL
Rural Clusters	18	3	6	9	7	6	0	0	49
Urban Network	0	4	4	2	0	0	0	37	47
Strategic Planning	8	5	2	3	1	1	1	4	25
Effective Schools	9	13	6	13	0	5	2	29	77
Higher Order Thinking Skills	1	0	1	0	0	1	0	3	6
CSMP	1	0	4	0	0	0	0	9	14
Sex Equity	1	13	6	5	0	0	0	9	34
Other	17	5	12	2	3	4	4	4	51
TOTALS	55	43	41	34	11	17	7	95	303

Figure 3
Clients Served Through Training and Technical Assistance
12/1/84 - 11/30/85

	CO	KS	MO	NE	ND	SD	WY	OTHER	TOTAL
Teachers	744	478	1,208	1,015	311	687	75	2,148	6,666
Administrators	732	700	2,452	892	172	91	119	1,192	6,350
SEA Staff	92	103	114	114	25	16	1	1,142	1,607
ISA Staff	25	0	18	95	0	0	0	225	363
IHE Staff	101	86	82	57	26	35	1	0	388
Board Members	8	69	0	157	2	14	32	0	282
Parents/Community	0	0	0	24	39	1	25	8	97
Other	62	294	106	2	8	12	2	748	1,234
TOTALS	1,764	1,730	3,980	2,356	583	856	255	5,463	16,987

III. PROGRAM ACTIVITIES

This section describes each of the following key Laboratory projects:

- Rural Development/Rural Clusters
- Urban Education Network
- Higher Order Thinking Skills Program
- Comprehensive School Mathematics Program
- Effective Schools Program
- Strategic Planning Program

Discussion focuses on activities conducted over the past year.

Rural Development/Rural Clusters

Clustering for School Improvement

"Cluster", "consortium", "cooperation", "sharing" are all names for neighboring school districts working together. For the past five years, McREL has piloted this idea with institutions higher education and intermediate service agencies.

The concept of clusters grew out of a national study of efforts to improve rural education. A major finding of that study was that rural education needs to develop the capacity to define its own problems and, with assistance, create solutions to those problems. Four key elements in establishing a rural school cluster are: (1) identifying a core group of interested schools that are approximately the same size and within reasonable driving distance of each other; (2) identifying individuals from a neighboring institute of higher education that have the interest of rural school over time; (3) establishing contact with key people in the state education agency to work with the cluster; (4) establishing an agenda that reflects the concerns of the participating districts, not that of the institution of higher education or the state education agency.

The willingness of educational agencies, particularly small school districts, to work together has increased rather dramatically during the last few years as new demands are being placed on schools for additional courses in math, science, and foreign languages. These problems are being exacerbated in many districts by enrollments that continue to decline and budgets that grow tighter. In a region where the economy is largely agriculturally based, there is little relief in sight.

Ten rural school clusters presently exist in McREL's states. Sixty-three districts are involved along with seven colleges and universities and six state departments of education. The activities of some of these clusters are described below.

> Five Colorado districts have formed a cluster for the purpose of improving science instruction in small rural schools. They began with a series of inservice sessions for the science teachers. They then adopted a common philosophy of science teaching, shared successful classroom strategies to get students more involved in the scientific process, worked with the Colorado science task force recommendations for K-12 science programs and developed ways to strengthen elementary science. The school districts provided release time for the teachers; McREL provided a resource person from Colorado State University.
>
> The Kansas Rural School Consortium involves eight districts and the Center for Rural and Small Schools. The cluster started with a set of seminars for professional development. Topics included challenging the gifted student in the small rural school, examining the national reports and research on teacher evaluation. A "computer consortium" is now being implemented to provide staff development and technical assistance to integrate the micro-computer into management and instruction functions of the schools district.
>
> The Mid-Missouri Small Schools Consortium consists of several schools and the Missouri Department of Elementary and Secondary Education. They started by focusing on using the micro-computer to expand and enrich the instructional program. A full-time trainer was hired, and the first "computer consortium" was initiated. There are now three "computer consortia" operating in Missouri, involving 15 school districts, the state agency, and the University of Missouri. In addition to each district pursuing its own particular agenda, the schools have worked cooperatively with the University on a "computer writing project."
>
> In Nebraska, McREL assisted in the development and facilitation of two cluster activities. The Nebraska Project Innovative Curriculum involves four schools. Together they looked at various options for mounting a cooperative curriculum development effort. A plan was worked out whereby McREL helped find and pay for the necessary consultant assistance; the districts found ways to free the teachers to work on the project by providing substitute teachers, and, on selected days, dismiss school so that all teachers could be involved. This project is exemplary for its level of local ownership. The idea originated with the local superintendents; they planed a major role in the planning and organization of the program from the very beginning. At their encouragement, the Project has sought out the bast possible curriculum

content people from both the state agency and Kearney State College, making clear that their role was one of support. The second cluster is a joint planning effort which will serve as the basis for making better use of the financial and human resources of the four districts to enrich and expand the instructional offerings to students attending those schools.

The cluster activity in North Dakota has grown out of two McREL supported studies, (a study of North Dakota rural high schools and a study of the county superintendency), conducted by the University of North Dakota's Center for Teaching and Learning. As a result, the University is currently working with 16 districts in two counties. Recently, the participating schools decided to establish a common calendar for staff development, a common theme for the staff development program for the forthcoming school term, and to jointly employ two guidance counselors to serve the needs of 11 of the smaller school districts. A second cluster of five North Dakota schools is being formed to explore the concept that rural schools have a more significant role to play in community and economic development.

McREL is working with South Dakota State University, six small schools, and the State Department of Elementary and Secondary Education to explore alternative organizational and instructional strategies for small schools. The project has piloted strategies for staff development, resource exchange, and community development. Studies on rural education have also been conducted in conjunction with the staff of the University of South Dakota. The results of these efforts have been disseminated to rural projects in other states served by McREL.

The clusters, with their linkages to institutions of higher education and state education agencies, constitute the basis of a regional network for rural education research and development that is yet largely untapped. The "technology" of establishing successful clusters is now fairly well understood. This knowledge is being assembled in a "handbook on creating clusters for rural school improvement" that will be distributed across the region.

A number of training, technical assistance, and research activities for rural educators were conducted over the last year. Selected activities are listed below. A more detailed listed is provided in Section V. CALENDAR OF EVENTS.

- A workshop on rural education was conducted at Adams State College for 20 school administrators and 100 teachers in Alamosa, Colorado.

- In Giltner, Nebraska, 140 school district staff and 10 university staff participated in a workshop on rural clustering.

- Over 120 teachers and administrators and 8 university staff participated in a rural school staff development session for the South Dakota Services Unit in Brookings, South Dakota.

- Seven case studies on small, rural schools have been conducted by McREL in conjunction with the University of North Dakota. The results of these studies was published as a special issue of the North Dakota Journal of Education.

- A planning and training session on Rural School/Rural Development was conducted for rural educators in Devil's Lake, North Dakota.

- McREL provided the Missouri Department of Elementary and Secondary Education with ongoing consultant help to explore ways in which the micro-computer and facilitate routine data collection and analysis.

- In Nebraska, McREL conducted a study and commissioned a report, "Information Technologies: Alternative Delivery Systems for Rural Schools." Copies have been distributed at state-wide meetings. A copy is provided as Appendix B.

- McREL supported/assisted with a study of the county superintendency which has resulted in proposed legislation to phase out the office and to replace it with a network of area service agencies in North Dakota.

- As a way of broadening the knowledge base of rural education, McREL is supporting Kansas State University in conducting a small follow-up study of rural school graduates to determine the quality of the products resulting from small high schools.

- Presentations on rural education were made at 8 regional and national conferences over the last year.

- McREL hosted or co-sponsored four rural education conferences this year.

- McREL staff have worked with North Dakota pilot sites to explore the Rural School/Community Development/Partnership Concept, as well as taught courses for the Rural Teachers' Network. Additionally, McREL has provided assistance to the University of North Dakota to conduct a mathematics and science institute for teachers and students from small, rural schools.

Urban Education Network

In 1977, the National Institute of Education, CEMREL, Inc., and urban educators joined together to address issues of urban schooling. A national conference, "What Do We Know About Teaching and Learning in Urban Schools?" was organized by a "regional joint planning group" made up of representatives of urban districts and state department of education in the Midwest. While the conference itself was a success, members of the planning group were even more excited about the process through which the conference came about. With support from NIE, they made a commitment to continue to work together to share ideas and resources. The Urban Education Network grew out of this collaboration.

The Network has been operating successfully as a learning and influence network since 1978. Participating school districts are:

Akron Public Schools
Chicago Public Schools
Cincinnati Public Schools
Cleveland Public Schools
Columbus Public Schools
Des Moines Public Schools
Detroit Public Schools
Indianapolis Public Schools
Jefferson County Public Schools (Louisville)
The School District of Kansas City, Missouri
Memphis City Schools
Milwaukee Public Schools
Minneapolis Public Schools
Nashville Public Schools
Omaha Public Schools
St. Louis Public Schools
The Special School District of St. Louis County
St. Paul Public Schools
Toledo Public Schools
Wichita Public Schools

Participating state agencies include those in Illinois, Indiana, Iowa, Kentucky, Michigan, Minnesota, Missouri, Nebraska, Ohio, Tennessee, and Wisconsin. Members identify common problems and concerns, and learn from and influence one another in their joint efforts to improve urban schooling. Network coordination was managed by CEMREL, Inc. until 1983 when it was transferred to McREL.

This year saw the beginning of a new phase in the development of the Urban Education Network. The Network has grown to include urban educators and agencies extending across three laboratory regions. The three laboratories, (AEL, McREL, and NCREL) have worked together this year to plan the activities of the Network and have done so with a great deal of success. Each laboratory has included the Network in their plans for the coming years and expects to expand membership and services.

Major accomplishments of the networking effort include regional and national conferences, research reports and products, a variety of technical assistance activities, and network-building activities. The Urban Education Program has co-sponsored 10 major educational conferences since 1978. These meetings have served over 1,000 educators including classroom teachers, content supervisors, central office administrators, state and regional agency staff, higher education staff, and members of professional organizations. Twenty four major research and information reports have been developed and distributed, including a 3-year study of the Network. Technical assistance has been provided to over 3,000 educators in a variety of topic areas.

Over the last year, Network activities have included those listed below:

- Meetings were held with superintendents and staff of participating districts to identify their needs for the future and to discuss continued participation in the Network.

- Members of the Tri-Network Advisory Committee met at NCREL to plan for cross-region collaboration and to plan for the next regional conference.

- A survey of all Network institutions was conducted to identify priorities for the coming year.

- A regional conference on "Higher Order Thinking Skills: Issues and Practices," was held in St. Paul, Minnesota. Over 100 teachers and administrators participated in the meeting. A summary of the meeting evaluation is included as Appendix C.

- Members of the Tri-Network Advisory Committee met at AEL to continue planning for cross-region collaboration and to plan for the winter conference in Louisville on "dropout prevention."

- Information was collected from all Network representatives for updating the Network Directory, and Sharing Successes Across Network Institutions: A Status Report. The updated publications will be distributed in 1986.

- Program staff responded to 73 requests for information and/or materials from Network representatives.

- Program staff provided on-site assistance to Omaha Public Schools in the implementation of their "effective schools program."

- Program staff provided on-site assistance to Wichita Public Schools in the areas of effective schooling and strategic planning.

Higher Order Thinking Skills Program

The purpose of the McREL higher order thinking skills program is to provide teachers with specific instructional techniques for reinforcing higher order thinking skills within content area classroom. The program divides thinking skills into three areas: (1) learning-to-learn skills; (2) content thinking skills; and, (3) reasoning skills. Learning-to-learn skills are intended to communicate to students that they must be actively involved in the learning process and to provide them with the tools to do so. The subskills within the learning-to-learn area include: attention control, goal setting, monitoring-attitudes, and self-evaluation. The purpose of the content thinking skills is to provide students with a set of information processing strategies which facilitate the learning of academic content sometimes referred to as domain-specific knowledge. There are four content thinking skills within the thinking skills program: (1) concept attainment; (2) pattern recognition; (3) synthesis; and, (4) proceduralization. The reasoning skills are those considered basic to many cognitive tasks. The include three distinct areas with subskills:

(1) Storage and Retrieval
    a. deep processing
    memory framework
(2) Matching Skills
    a. categorization
    b. extrapolation
    c. analogical reasoning
    d. evaluation of logic
    e. evaluation of value
(3) Constructing New Knowledge
    a. problem solving
    b. elaboration
    c. invention

This model for thinking skills instruction was evaluated both formatively and summatively during 1984 and 1985. Developmental versions of the model were presented to over 200 teachers. Data were collected on 77 teachers who piloted the techniques with some 1,900 students. Each component of the model was evolved separately. Results indicate that the components of the model in its final form had significant effects (based on teacher observation and teacher-made tests) an student motivation, meta-coginitive knowledge about task performance, and application of content. Student materials and a formal teacher training program are now being developed.

Comprehensive School Mathematics Program

Now used by more than 43,000 students nationwide, the Comprehensive School Mathematics Program's (CSMP) elementary mathematics curriculum is an exciting, innovative program which represents the best of basic mathematics education, taking a balanced approach to skill development, conceptualization, and problem solving. CSMP is a complete mathematics curriculum for grades K-|. The curriculum was developed over a number of years with support from the National Institute of Education. In 1984, McREL purchased the publishing rights from the government and is maintaining program dissemination.

CSMP is currently used in 1,846 classrooms across the nation, in 484 schools. This does not include usage in gifted or remedial pull-out programs. Currently, 118 trained administrators and 1,847 trained teachers are implementing the program for 43,755 students. Figure 4 illustrates program usage by state.

This year, CSMP staff provided a variety of services to current and prospective users.

- Program staff responded to 389 requests for program information over the year.

- Program staff presented information about mathematics instruction to the staff of the Kentucky Department of Education.

- A CSMP awareness presentation was made to educators attending the Tennessee Facilitation Awareness Conference in Gatlenburg, Tennessee.

- A planning meeting with the Michigan State Facilitator and 10 school district representatives was held for prospective users.

- A presentation on CSMP was made to 15 teachers at the Ohio Conference for Early Childhood Education.

- A CSMP presentation was made in a national NDN Teleconference on Critical Thinking/Problem Solving.

- A CSMP training workshop for 33 teachers and 3 administrators, Ft. Collins Public Schools, was held in Ft. Collins, Colorado.

- A CSMP training workshop for 23 teachers and 2 administrators was held in Mason, Michigan.

- A CSMP training workshop for 15 teachers was held in St. Louis, Missouri.

- A CSMP workshop for 12 mathematics teachers/coordinators was held in St. Louis, Missouri.

- A CSMP workshop for 10 mathematics teachers/coordinators was held in Boston, Massachusetts.

- A CSMP workshop for Guilderland Public Schools with 5 teachers and coordinators was held in Guilderland, New York.

- A CSMP workshop for Ellisville Public Schools with 10 teachers and coordinators was held in Ellisville, Missouri.

- A CSMP workshop for Woodridge Public Schools with 20 teachers and coordinators was held in Woodridge, Illinois.

- CSMP training for Enterprise and Pendleton Public Schools for 20 teachers and 25 administrators was held in Enterprise, Oregon.

Figure 4

CSMP Usage
1984-1985

State	# of Classrooms	# of Students
California	3	52
*Colorado	14	462
Florida	24	264
Georgia	1	20
Illinois	16	450
Indiana	5	126
Iowa	Gifted	75
Kentucky	Gifted	60
	74	2,106
Louisiana	4	52
Maryland	170	4,564
Michigan	564	14,587
Minnesota	20	454
*Missouri	10 Gifted	96
	122	2,733
New Hampshire	6	142
New Jersey	58	1,158
New York	Remedial	20
	353	8,324
Ohio	62 Gifted	595
Pennsylvania	6	120
Tennessee	43	811
Texas	57	1,244
Virginia	Gifted	700
	79	1,493
Washington	15	254
Wisconsin	133	2,607
*Wyoming	7	186
Totals	1,846 + pull-outs	43,755

*McREL region

Effective Schools Program

The Effective Schools Program (ESP) is a is a systematic, staff development program designed to foster self-sustained improvement efforts at the school building level. The ESP is research based. It synthesizes research findings on effective teaching and instruction, on effective schools, on effective building-level leadership and organization, and on curriculum and assessment. Equally important, the staff development processes used are based upon research findings in the areas of planned change and adult learning.
The goals of the program are: to provide successful learning opportunities to all students who attend school; and, to develop and/or enhance a school improvement process which is continuous, cooperative, and self-renewing. To accomplish these goals, ESP bases activities on objectives designed to help participants:

- gain knowledge about the effective schools and teaching research;
- master diagnostic procedures to compare their school with the characteristics of an effective school, as described in the research;
- select alternative strategies to improve performance in areas of need indicated by the analysis of diagnostic procedures;
- implement the relevant strategies;
- develop an assessment system to document improvements in student achievement and other performance outcomes resulting from ESP activities.

Meeting these objectives requires commitments from both the McREL and the school staffs. Through the program, McREL provides teachers and administrators with an orientation of the research on instructionally effective schools, and translates this research into clearly defined action steps so that improvements can be accomplished within the individual school settings. An initial step in the school improvement process is the development of the building level leadership teams. Each leadership team represents a school building within the district and is composed of the principal and four to eight teachers from that building. Teachers are typically drawn from the building's various grade, content, and specialist areas. Through the program, team members become leaders in fostering school collegiality, carrying out the tasks of identifying school goals and priorities, designing a leadership team plan, selecting activities leading to increased effectiveness, and assessing their own progress in implementing changes.

The program is delivered through four one-day workshops for building level teams. The workshop sessions are scheduled a month or more apart and usually occur in September, October, November, and February. Four half-day meetings are scheduled for administrator development; the meetings are conducted at intervals between September and May. Two days are scheduled for follow-up site visits at the individual school buildings. Site visits are scheduled for the Spring or Fall following the workshop sessions at the request of the building teams. During site visits McREL staff members disseminate materials to support the building team efforts, act as coaches for team members, and assist teams in implementing their leadership team plans for school improvement.

The content of the sessions for leadership team training integrates the areas of research on which the conceptual framework is based. The workshop sessions focus on three content and two process areas. Team members use systematic data collection procedures to gather information about current practices in each area, are trained and coached to use new practices in each area, and develop their own training materials to share their knowledge with colleagues. Five major topics are addressed in the team workshops:

- Teaching and Instruction
- Building Level Leadership and Organization
- Curriculum/Assessment Relationship
- Facilitation and Change
- Planning

McREL's relationship with ESP participants continues from one to five years. During the first year, which is basically an assessment, planning, and leadership development year, Laboratory staff guide the process and are directive in choosing the topics and activities which are addressed by the leadership teams. Following that first year, the McREL role changes and McREL staff members become resource/support personnel who are responsive to directions and requests from the school teams. For example, in this role the staff member visits schools, meets with veteran teams in review sessions, provides feedback to plans and activity reports, connects teams from different districts who share mutual concerns, and disseminates research and resource materials which are pertinent to the plans and activities of each leadership team. The key component of the long-term relationship is the establishment of a continuous feedback/resource support system. The support system provides the leadership teams with a mechanism through which evaluation, renewal, and revision activities can be developed. These activities are critical elements in the effort to obtain successful, long-term improvement.

During the last year, McREL staff conducted the following ESP activities.

With Emporia Public Schools, Emporia, Kansas:

- Team training session for 58 teachers and administrators
- Team training session for 44 teachers and administrators
- Administrator training for 15 administrators
- Administrator training for 19 administrators

With El Dorado Springs Public Schools, El Dorado Springs, Kansas:

- ESP planning session with 7 administrators

With Independence Public Schools, Independence, Kansas:

- Site visits involving 75 teachers and administrators

With Junction City Public Schools, Junction City, Kansas:

- ESP planning with 7 administrators
- ESP planning with 7 administrators
- Training for 23 administrators
- Team training for 70 teachers and 30 administrators

With Shawnee Mission Public Schools, Shawnee Mission, Kansas:

- ESP planning with 6 administrators

With Winfield Public Schools, Winfield, Kansas:

- Team training for 35 teachers and administrators
- Team training for 25 teachers and 10 administrators

With Alamosa Public Schools, Alamosa, Colorado:

- Training for 10 administrators
- Training for 15 administrators

With Buena Vista Public Schools, Buena Vista, Colorado:

- ESP Orientation for 50 administrators

With Glenwood Springs Public Schools, Glenwood Springs, Colorado:

- ESP Orientation for 50 administrators

With Nebraska ESU Agent Trainers:

- Follow-up training for 13 ESUs
- Follow-up training for 50 teachers, 12 principals, 13 ESUs, 5 SEAs
- Site visits involving 60 teachers, 18 administrators, and 3 ESUs

With Omaha Public Schools, Omaha, Nebraska:

- Training for 50 teachers and administrators
- Training for 40 teachers and 10 administrators
- Training for 75 teachers and 20 administrators
- Training for 80 teachers and administrators
- Training for 70 teachers and 40 administrators
- Training for 100 teachers and 12 administrators
- Training for 20 teachers and 5 administrators

With Liberty Public Schools, Liberty, Missouri:

- Team training for 54 teachers and 6 administrators
- Team training for 52 teachers and 6 administrators
- Team training for 35 teachers and 15 administrators

With Raytown Public Schools, Raytown, Missouri:

- Veteran team training for 55 teachers and administrators
- Veteran team training for 30 teachers and 6 administrators
- Site visits involving 35 teachers

With Ft. Madison Public Schools, Ft. Madison, Iowa:

- Team training for 25 teachers and 11 administrators
- Team training for 40 teachers and administrators
- Team training for 25 teachers and 11 administrators
- Team training for 50 teachers and administrators
- Administrator training and veteran team site visits

With Sioux Falls Public Schools, Sioux Falls, Iowa:

- Team training for 9 teachers and 2 administrators
- Team training for 9 teachers and 2 administrators
- Team training for 9 teachers and 2 administrators
- Team training for 9 teachers and 2 administrators
- Team training for 9 teachers and 2 administrators

With Iowa AEA #3:

- Administrator training and site visits
- Site visits
- Follow-up training for 35 teachers and 15 administrators

With Cedar Rapids Public Schools, Cedar Rapids, Iowa:

- Team training for 50 teachers and administrators
- Team training for 50 teachers and administrators

With Carroll Public Schools, Carroll, Iowa:

- Training for 55 teachers and administrators

With Spenser Public Schools, Spenser, Iowa:

- Training for 55 teachers and administrators

With Des Moines Public Schools, Des Moines, Iowa:

- Training for 35 teachers and administrators

With Detroit Public Schools, Detroit, Michigan:

- ESP Planning with 10 teachers and administrators
- Team training for 21 teachers and 29 administrators
- Team training for 21 teachers and 29 administrators
- Team training for 21 teachers and 29 administrators
- Team training for 21 teachers and 29 administrators
- Site visits involving 30 teachers and 10 administrators

With Cincinnati Public Schools, Cincinnati, Ohio:

- Follow-up training for 150 teachers and administrators
- Follow-up training for 30 teachers and 11 administrators
- Site visits involving 150 teachers and 28 administrators
- Follow-up training for 100 teams

Information regarding the overall effects of the program are presented in the ESP evaluation report submitted to NIE under separate cover.

Strategic Planning Program

The long range success of an organization depends on its ability to envision a future, establish a core set of values and a clear sense of mission and focus, develop the capacity to implement that mission, and to modify activities as society changes. Today, school leaders face difficult pressures (e.g., economic restructuring, demographic trends, restructuring institutions and organization, new technologies, and increased competition) from changes in the larger society that demand a positive response. One good response technique is strategic planning--a process for identifying societal changes and then acting upon them.

McREL's Strategic Planning Program focuses on assisting local and state level education leadership groups to develop a vision and planning framework consistent with the demands of the future. The program provides educational leaders with the tools they needs to engage in developing and implementing long-range goals and objectives. McREL staff work with agencies to design a strategic plan that generally meets the requirements of strategic planning and specifically meets the needs of the agency or organization. The process is both intense and time consuming. It involves a complete analysis of an agency's needs, resources, and decision-making structure in light of the demands of the 21st century. McREL staff help design the process, gather data, work with groups to interpret the data, conduct and provided analyses of data, consult with staff, and assist in the development of the strategic plan.

McREL has had strategic planning experiences in 24 rural and urban school districts and with two state boards of education. In 1985, McREL engaged in the strategic planning efforts listed below.

- A strategic planning session for 30 school administrators from the Denver metropolitan area was held in Aurora, Colorado.
- A state-wide strategic plan was developed for the State of Kansas, working under the direction of the State Board of Education and in cooperation with professional associations and regional groups of education throughout the state. Six strategic planning sessions were held with participants of these groups.
- Strategic planning observations and training sessions for the Detroit Public Schools, Detroit, Michigan were conducted.

- A strategic planning presentation was made to 200 vocational education administrators in Los Angeles, California.

- Two strategic planning meetings with representatives of Boulder Public Schools, were held in Boulder, Colorado.

- A strategic planning meeting with administrators of Pouder Valley Schools was held in Ft. Collins, Colorado.

- A strategic planning session for the Ft. Collins Board of Education was held in Ft. Collins, Colorado.

IV. IMPACT ANALYSIS

This section presents additional evidence of McREL's impact in the seven-state region including information on client perceptions of the Laboratory's services, and other evidence such as press clippings, letter of commendation, publications and reports, and cooperative working agreements with regional constituents.

Client Perceptions of Services

In late 1984 and early 1985, as part of a general Laboratory planning process, McREL met with state leaders in each of the seven states in the region. These meetings, hosted by chief state school officers in most cases, involved the leadership of important state groups such as teacher and administrator associations, state and local school boards, state legislatures, parent associations, institutions of higher education, and others. These groups met with McREL representatives to discuss the usefulness of past services and to identify needs for future activities. In each meeting, state leaders were asked to complete a brief survey form indicating the extent to which past services were useful and appropriate to state needs. The response was very positive in every case. A copy of the survey form and individual state briefings distributed at the meetings are included as Appendix D.

Other Documentation of Impact

Other documentation of Laboratory impact includes press clippings from regional newspapers, letters of commendation, publications and reports written and disseminated by Laboratory staff, and written cooperative agreements between McREL and agencies/organizations in the region with whom the Laboratory works. Press clippings are included as Appendix E. Letters of commendation received in 1985 are included as Appendix F. A list of publications and reports completed in 1985 is included as Appendix F. Appendix H. contains a list of agencies that have submitted written endorsements of the Laboratory's work and written cooperative working agreements for the future. In the Laboratory's view, these cooperative working agreements for the future represent the highest form of impact documentation.

Summary

McREL has been providing information, materials, technical assistance, and training to educators in the Laboratory's region for almost 20 years. Over this time, the Laboratory has become an important school improvement resource in the Central Region and across the country. This last year has been particulary successful. Some of McREL's most notable contributions to school improvement in 1985 are listed below.

The Laboratory has provided direct service to 57,000 educators in the region.

The Laboratory has disseminated written materials and information to 39,000 educators in the region.

Seventeen thousand participants have received training conducted by McREL staff.

McREL staff have made 50 major presentations to educators in the region and nationwide.

Ten rural education clusters now exist in McREL's region involving 63 school districts, 7 colleges and universities, and 6 state departments of education.

Twenty large urban school districts and 11 state department of education participate in the Urban Education Network, now jointly sponsored by McREL, AEL, and NCREL.

Over 43,000 students across the country use McREL's Comprehensive School Mathematics Program as their basic mathematics curriculum.

Twenty one school districts and 14 intermediate service agencies participated in McREL's Effective Schools Program this year.

Leadership groups in each state in the region worked with the Laboratory to assess past services and to develop plans for the future.

Every Chief State School Officer in the region as well as 40 additional education agencies in the region endorsed McREL's service plan for the future.

V. CALENDAR OF ACTIVITIES

December, 1984

1	ESP Team Training for 54 teachers and 6 administrators, Liberty, MO--Susan Everson, Elaine Clemens.
3	Participation in NE Colorado BOCES cluster session, Haxton, CO--Paul Nachtigal.
4	Presentation to Kentucky SEA meeting, Frankfort, KY--Susan Everson, Claire Heidema, Bob Marzano.
5	CSMP awareness presentation to the Tennessee Facilitation Awareness Conference, Gatlenburg, TN--Clare Heidema.
7	Meeting with 30 Metropolitan School Administrators to conduct strategic planning session, Aurora, CO--Bob Ewy.
	Meeting with selected representatives of the Kansas City School District, Kansas City, MO--Susan Everson, Sharon Koenigs.
10	Nebraska Education Service Unit agent training follow-up for the Effective Schools Program, Scottsbluff, NE--Jean Brownlee Conyers.
10-12	Staff development meeting for 15 AEA Supervisors working on accreditation classification process, Jefferson City, MO--Paul Nachtigal, Susan Everson, Lynn King.
11	New Project Orientation Meeting with National Diffusion Network, Washington, DC--Claire Heidema.
12	Conduct Missouri Chapter One Pilot Training with 12 program representatives, Kansas City, MO--Susan Everson.
13-14	Region VII Sex Equity Meeting with 15 state representatives and GAC representatives, Kansas City, MO--Shirley McCune, Lynn King.
14	Planning session with Colorado State University Office for Rural Education, Fort Collins, CO--Paul Nachtigal.
18	Meeting with University of South Dakota and cooperating schools regarding N.S.F. activities, Vermillion, SD--Paul Nachtigal.
20	Strategic planning meeting with State Board of Education commissioners, Topeka, KS--Shirley McCune.

January, 1985

1	Training with Learning Disability instructors at Kansas University and meeting with Dean Scannell at School of Education, Lawrence, KS --Jean Conyers.
8	Bidders Conference at NIE, Washington, DC--Larry Hutchins, Jean Conyers.
9	Joint development of a rural school audit process for rural Nebraska cluster, Grand Island, NE--Bob Ewy, Paul Nachtigal.
9-10	ESP Administrator and Team sessions with 11 administrators and 25 teachers with Great River AEA, Ft. Madison, IA--Susan Everson.
10	NDN teleconference training, Kansas City, MO--Clare Heidema.
	Work with desegregation consultants, San Francisco, CA--Shirley McCune.
11	ESP Videotape on instruction with Bob Foley, Cedar Rapids, IA--Susan Everson.
14	Planning meeting to develop instruments for "Valley" audit, Denver, CO--Bob Ewy.
	Presentation to Northglenn/Thornton School District regarding ESP research, Northglenn, CO--Susan Everson.
15	ESP training session for 50 teachers and administrators, Omaha, NE--Bob Ewy.
	Planning meeting with Walsh/Pembina county cluster with 4 IHE staff and 17 superintendents, Hoople, ND--Paul Nachtigal.
	Observation of NE agent delivery at Kearney, NE--Jean Conyers.
16-18	Technical assistance to Wichita Public Schools--Larry Hutchins.
	Participating in Northwest Evaluation Workshop with 20 science department representatives and 17 teachers and administrators, Salem, OR--Dick Bingman.
17	Work session with Missouri Department of Elementary & Secondary Education for area supervisors of instruction, Kansas City, MO--Paul Nachtigal.
	Strategic planning with 10 representatives of Kansas Education Association, Topeka, KS--Shirley McCune.
18	Participation in Northwest Education Workshop, Salem, OR--Dick Bingman.

19	ESP Team Training for 58 administrators and teachers, Liberty, MO--Susan Everson, Elaine Clemens.
20-21	Presentation to 900 teachers and administrators regarding Effective Schools literature, Sioux City, IA--Jean Conyers.
22	Professional Growth Seminar, Idaho Springs, ID--Bob Ewy.
	Presentation to Greater Kansas City Science Association for 24 teachers and educators, Kansas City, M)--Dick Bingman.
22-29	Site visits to Missouri computer clusters and foreign language programs, Montgomery, and Columbia, New Franklin, and Salisbury, MO--Paul Nachtigal.
22-23	Meeting with ESU on manual feedback and future plans, Kearney, NE--Jean Conyers.
23	ESP Team Training for 58 teachers and administrators, Emporia, KS--Susan Everson, Lynn King.
24	Training with administrators and faculty in Denver Public Schools, Denver, CO--Jean Conyers.
24	Strategic planning observations with the Detroit Public Schools, Detroit, MI--Shirley McCune.
28-29	ESP administrator and Team Training sessions for 38 teachers, administrators, and central office staff, Winfield, KS--Susan Everson, Lynn King.
29	Effective Schools research orientation with 50 administrators, Glenwood, Springs, Vail, CO--Bob Ewy.
29	Technical assistance to educators in Bismarck, ND--Larry Hutchins.
30	ESP Orientation with 50 administrators, Buena Vista, CO--Bob Ewy.
31	ESP Training session with 11 administrators and teachers, Sioux Falls, SD--Susan Everson, Lynn King.
	Staff development session, Cotopaxi/Westcliffe project, with 1 IHE staff and 14 teachers and administrators, Cotopaxi, CO--Paul Nachtigal.
	Strategic planning in vocational education with 200 administrators working with the California State University at Fullerton and the California Secondary Education Association, Los Angeles, CA--Shirley McCune.

February, 1985

1 Meeting with Nebraska Chief State School Officer, Lincoln, NE--Larry Hutchins.

ESP Team Training with 11 teachers and administrators, Sioux, Falls, SD--Lynn King.

Coordination of Cotopaxi/Westcliffe staff development session, Westcliffe, CO--Paul Nachtigal.

4 Strategic planning meeting with 12 participants, Topeka, KS--Shirley McCune.

4-5 ESP Team Training sessions with 50 participants, Cedar Rapids, IA--Bob Ewy.

5 Planning meeting with Denver Public Schools, Denver, CO--Larry Hutchins.

5-7 ESP Follow-up sessions with 150 teachers and administrators, Cincinnati, OH--Jean Conyers, Susan Everson.

6 Project Innovative Curriculum, scope and sequence work session with 10 IHE and 15 SEA staff, and 128 teachers and administrators, Harvard, NE--Paul Nachtigal.

6-7 ESP Training sessions with 55 participants, Carroll, IA--Bob Ewy.

7 Strategic planning meeting with Boulder Public Schools, Boulder, CO --Larry Hutchins.

South Dakota Services Unit Small School Staff Development session with 8 IHE staff and 127 teachers and administrators, Brookings, SD--Paul Nachtigal.

Presentation to Aurora Public Schools, Aurora, CO--Larry Hutchins.

Presentation at Kansas University Regent Center to 65 student teachers from 4 university campuses, Shawnee Mission, KS--Gretchen Wilbur.

8 ESP Team Training session with 55 teachers and administrators, Spencer, IA--Bob Ewy.

11-12 Meeting of Network Advisory Committee of Urban Education Network (with NCREL and AEL), Elmhurst, IL--Sharon Koenigs.

ESP Team Training session for Heartland AEA with 35 teachers and administrators, Des Moines, IA--Jean Conyers.

11-15 ESP Team Training sessions, Cedar Rapids, IA--Larry Hutchins.

12	Consultation meeting on media design strategies/newsletter, and training tapes, Kansas City, MO--Gretchen Wilbur.
12-13	Kansas Board Strategic Planning Desegregation meetings at Topeka, KS, Kansas City, MO--Shirley McCune.
13	ESP Administrator Training session with 15 administrators, Emporia, KS--Susan Everson, Lynn King.
	Meeting with Pouder Valley administrators, Ft. Collins, CO--Shirley McCune.
14	Presentation on Effective Teaching for Low Achievers in Secondary Settings at Overland High School for 32 teachers and administrators of the Cherry Creek School District, Denver, CO--Jean Conyers.
14-17	Strategic planning meetings for Detroit Public Schools with 25 administrators, St. Clair, MI--Shirley McCune.
15	ESP Veteran Team Training session for 55 teachers and administrators Raytown, MO--Susan Everson.
18	Strategic planning meeting with Board of Education, Ft. Collins, CO --Larry Hutchins.
	Planning session with Detroit Public Schools administrators, Detroit, MI--Susan Everson, Lynn King.
19	ESP Team Training sessions with 40 teachers and 10 administrators, Omaha, NE--Bob Ewy.
19-20	ESP Team Training sessions with 40 teachers and administrators of the Great River AEA, Ft. Madison, IA--Susan Everson.
20	Evaluation leadership role, Northwest Evaluation Workshop with 5 teachers, Portland, OR--Dick Bingman.
21	Planning meeting with Missouri Chief State School Officer, Jefferson City, MO--Larry Hutchins.
	Learning strategies training for secondary special education and remedial teachers, Denver Public Schools, Denver, CO--Jean Conyers.
	Participation in Colorado Fellows Program with 20 participants, Denver, CO--Shirley McCune.
22	Planning meeting with Kansas Chief State School Officer, Topeka, KS--Larry Hutchins.
25-27	Pilot application of Rural School Audit Process, North Conjeos, CO--Bob Ewy.
25-28	San Luis Valley School Assessment Project, Alamosa, CO--Shirley McCune, Gretchen Wilbur.

26	ESP Veteran Team Training session with 20 teachers and administrators, Piper, KS--Susan Everson.
26	Rural School/Rural Development Planning and Training session, Devil's Lake, ND--Paul Nachtigal.
27-28	ESP Site Visits to 3 schools with 75 teachers and administrators, Independence, KS--Lynn King.

March, 1985

1 Participation in NDN Annual Conference with 500 representatives of the Department of Education, state departments of education, and other educators, Arlington, VA--Clare Heidema.

Presentation on School Improvement Using Clusters, with John Goodlad, to 50 LEAs, Denver, CO--Bob Ewy.

Met with Director of OCR, to discuss sex equity for Region VII with 6 federal representatives, Kansas City, MO--Gretchen Wilbur, Lynn King.

Worked on Title IV proposal development and grant application, Kansas City, MO--Gretchen Wilbur.

1-2 McREL Board of Directors meeting with 14 board members, Kansas City, MO--Larry Hutchins, Norma Watson, Pat Fisher

2 Conducted ESP Team Session with 15 administrators and 35 teachers, Liberty, MO--Susan Everson, Elaine Clemens.

4 Planning meeting with NE Colorado Science Cluster with 7 teachers, 1 IHE staff, and 1 BOCES, Haxton, CO--Paul Nachtigal.

4-5 ESP Administrator and Team Session IV with 10 administrators and 25 teachers, Winfield, KS--Susan Everson, Lynn King.

4-6 ESP Administrators Training and Site Visits for AEA #3 area in Iowa --Bob Ewy.

5 Participated in service coordination with Iowa DPI/MCNS Coordinators Conference, Des Moines, IA--Gretchen Wilbur.

5-6 Conducted cooperative planning/district audit with 1 IHE staff, 24 parents, 24 teachers, and 8 administrators, Marquette, NE--Paul Nachtigal.

Service identification for '85-'86 for Des Moines Public Schools/ training and proposal, Des Moines, IA--Gretchen Wilbur.

6 ESP Team Session IV with 44 LEA staff and 5 university staff, Emporia, KS--Susan Everson.

Technical assistance for Advocacy Program Development, Mason City, IA--Gretchen Wilbur.

6-7 FY'85 planning meeting for cooperative arrangements with 14 representatives of 7 State School Board Associations, Denver, CO--Larry Hutchins, Bob Ewy.

7 Learning strategies training for Denver remedial program with 125 teachers and 12 administrators, Denver, CO--Jean Conyers.

7 Colorado State University Annual Rural School Conference and planning session with 5 IHE, 1 SEA, and 3 LEA staff, and 2 BOCES, Ft. Collins, CO--Paul Nachtigal.

7-8 Project visit for NDN Project Monitor, visit schools in St. Louis area using CSMP, St. Louis, MO--Clare Heidema.

ESP Administrator and Team Training, and Site Visits to veteran teams, with 2 administrators and 9 teachers, Sioux Falls, SD--Susan Everson, Lynn King.

8 FY'85 planning meeting for cooperative arrangements with 7 representatives of the School Administrators Association, Denver, CO--Larry Hutchins, Bob Ewy.

Kansas Title IV Conference on Women in History, Wichita, KS--Gretchen Wilbur.

Meeting with Ray Wormwood and Kent Viehoever, NIE, Washington, DC--Verna Smith.

11 FY'85 planning meeting follow-up with Nebraska Chief State School Officer, Omaha, NE--Larry Hutchins.

11-12 NCA Audit, Greeley, CO--Bob Ewy.

12 Media design consultation/newsletter, Denver, CO--Gretchen Wilbur.

13 Meetings with Michigan State Facilitator and 10 representatives of school districts considering CSMP, Mason, MI--Clare Heidema.

FY'85 planning meeting with 2 administrators, Wichita Public Schools, Wichita, KS--Larry Hutchins.

13-14 Presentation at Nebraska Small/Rural School Conference for 5 SEA, 12 IHE, and 120 LEA administrators, Kearney, NE--Paul Nachtigal.

Equity Conference planning meeting, Denver, CO--Gretchen Wilbur.

14 Learning strategies training for Denver remedial program with 35 teachers and 2 supervisors, Denver, CO--Jean Conyers.

15 Complete administration of Science Survey to 100 secondary school teachers, Kansas City Public Schools, Kansas City, MO--Dick Bingman.

Attend down-link site for NDN teleconference, Kansas City, MO--Clare Heidema.

15-16 ESP Administrator and Team Session I with 21 teachers and 29 administrators and specialists, Detroit Public Schools, Detroit, MI--Susan Everson, Lynn King.

18 Veteran Team Session Site Visit with 30 teachers and 6 administrators, Raytown, MO--Susan Everson.

19-20 ESP Administrator and Team Session IV for Great River AEA #16, with 25 teachers and 11 administrators, Fort Madison, IA--Susan Everson.

ESP Training Phase I and II with 75 teachers and 20 administrators, Omaha, NE--Bob Ewy.

19-21 Agent Training follow-up visits with 60 teachers, 18 administrators, and 3 ESUs in Seward, Omaha, and Kearney, NE--Jean Conyers.

20 Complete review of software for use in sex equity, Kansas City, MO--Dick Bingman.

Meeting on impact, Denver, CO--Lynn King, Bob Marzano, Sharon Koenigs.

21 Presentation School Board and administrators, ESP, Junction City, KS--Susan Everson.

23 Planning meeting with 7 administrators from El Dorado Springs, KS, Kansas City, MO--Susan Everson.

24-28 South Dakota Administrators Training, Sioux Falls and Rapid City, SD--Shirley McCune.

25 Keynote presentation on Higher Order Thinking Skills to Missouri Association of Secondary School Principals, for 200 secondary administrators, Lake of the Ozarks, MO--Bob Marzano.

Planning meeting for new Kansas cluster with 1 SEA staff and 6 superintendents and principals, Bleeville, KS--Paul Nachtigal.

28 Presentation at Metro State University to 30 psychology class graduate students, Denver, CO--Bob Marzano.

April, 1985

1	Leadership Meeting of South Dakota Rural School Cluster involving 6 LEA superintendents and principals and 3 IHE staff, Brookings, SD--Paul Nachtigal
	ESP information session with 9 Adams County school district administrators, Denver, CO--Shirley McCune
2-4	Presentation of a paper at AERA conference, Chicago, IL--Susan Everson
3	CSMP presentation at Ohio Conference for Early Childhood Education to 15 teachers and administrators, Columbus, OH--Clare Heidema
4	Strategic planning meeting with Boulder Public Schools, Boulder, CO --Larry Hutchins
8-10	Meeting with North Central Association staff to design alternative assessment system, Greeley, CO--Bob Ewy
8-11	Alamosa Program Assessment meeting with North and South Conejos school districts with 100 administrators, Alamosa, CO--Shirley McCune
9	Technical assistance to Denver Public Schools, Denver, CO--Larry Hutchins
11	Secondary teacher training in learning strategies for 36 teachers and 2 supervisors, Denver Public Schools, Denver, CO--Jean Conyers
	Participation in Self-Improvement Goal Setting Workshop, Denver, CO --Bob Ewy
12	Workshop on teacher evaluation and effective teacher research with 30 principals and superintendents, Greenwood, CO--Bob Ewy
15	Dissemination of Sex Equity Newsletter to colleagues in four-state region, Kansas City, MO--Gretchen Wilbur
	Planning for service delivery to Leavenworth Public Schools with 2 administrators, Leavenworth, KS--Gretchen Wilbur
16	Strategic planning meeting with superintendent, 8 teachers, 8 curriculum specialists, 10 board members and directors, Rawlins, WY--Shirley McCune
16-17	ESP training sessions in Omaha Public Schools with 80 teachers and administrators, Omaha, NE--Bob Ewy
16-18	ESP Follow-up sessions with 30 teachers, 7 principals, and 4 central office staff, Cincinnati Public Schools, Cincinnati, OH--Susan Everson, Jean Conyers

18-19	CSMP presentation in a national NDN Teleconference on Critical Thinking/Problem Solving, Kansas City, MO--Clare Heidema
	Sex Equity Consultation II with 15 state equity and vocational education personnel, Kansas City, MO--Gretchen Wilbur, Lynn King, Shirley McCune, Dick Bingman
19	Presentation of ESP Overview to Wyoming School Boards Association, Douglas, WY--Bob Ewy
	Presentation at Education Today Conference for 4 IHE staff and 75 LEA superintendents, University of South Dakota, Vermillion, SD--Paul Nachtigal
	Announcement of "Directing Change for Changing Directions" mailed to 650 superintendents and administrators--Gretchen Wilbur
22	Nebraska Planning Cluster Meeting to work on audit report with 1 IHE and 1 SEA staff, Lincoln, NE--Paul Nachtigal
23	Work with University of South Dakota on rural science delivery project with 7 IHE staff, Vermillion, SD--Paul Nachtigal
	Presentation on "Action Agenda" to Post Secondary Rural Education Conference, Sioux Falls, SD--Paul Nachtigal
	Planning/coordination with Women's Resource Center for Metropolitan Community Colleges with 1 administrator Kansas City, MO--Gretchen Wilbur
24	ESP Administrator Session IV for 19 administrators, Emporia, KS--Susan Everson, Lynn King
	Rural Ed/Rural Development Advisory Committee meeting with 5 SEA staff, Bismarck, ND--Paul Nachtigal
	Participation in Monthly meeting of Women in Leadership Program, Des Moines Public Schools, Des Moines, IA--Gretchen Wilbur
25	Administration and collection of elementary school science surveys for Kansas City school district, involving 290 teachers, 5 administrators, and 15 others, Kansas City, MO--Dick Bingman
25-26	Nebraska Title IX Physical Education Conference with 150 coordinators, P.E. coaches/teachers, Lincoln, NE--Gretchen Wilbur
26	Presentation at spring "Conference on Issues and Trends in School Administration" for 20 IHE, 5 SEA, and 30 LEA staff and 3 BOCES, Colorado Springs, CO--Paul Nachtigal
	Presentation to Missouri School Boards Association, Columbia, MO--Larry Hutchins

26-27	Workshop on ESP to Iowa State Education Association, Des Moines, IA--Bob Ewy
	ESP Training sessions with 21 teachers and 29 administrators, Detroit, MI--Susan Everson, Lynn King
27	Discussion leader and opening speaker at Science Teachers of Missouri Annual Conference for 85 teachers, 10 curriculum specialists, and 15 others, Springfield, MO--Dick Bingman
28	Strategic planning meeting with Nebraska State School Boards and the SDE, Lincoln, NE--Larry Hutchins, Bob Ewy
29	ESP Team training sessions with 9 teachers and 2 administrators, Sioux Falls, SD--Susan Everson, Lynn King
29-30	Ten site visits to AEA #13, Cylinder, IA--Bob Ewy
30	Presentation to Southeast Colorado BOCES, "Educational Opportunities in Small Schools" for 8 BOCES and 20 LEA superintendents, Florissant, CO--Paul Nachtigal
	ESP Follow-up session with 50 teachers, 12 principals, 13 ESUs and 5 SEAs, Lincoln, NE--Jean Conyers
30-5/1	Black Hills Cooperative ESP and Strategic Planning meeting with 40 principals, Lead, SD--Shirley McCune

May, 1985

1 Presentation at Staff Development Conference on NE agent training with 1 SEA, 13 ESUs, 30 teachers, and 12 principals, Lincoln, NE--Jean Conyers

ESP Team and Administrator Training with 2 principals and 9 teachers, Sioux Falls, SD--Susan Everson, Lynn King

Participation in South Dakota ACTE Steering Committee meeting to discuss ESP collaboration with 7 IHE representatives, Sioux Falls, SD--Susan Everson, Lynn King

Participation in MO State Elementary and Secondary Schools Conference to review local science delivery systems (Title III), with 50 teachers and 4 SEA staff, Kansas City, MO--Dick Bingman

2 Raytown site visit with 35 middle school teachers, Raytown, MO--Susan Everson

2-3 On-site monitoring review, Sex Equity Program, by U.S. Department of Education staff, Kansas City, MO--Shirley McCune, Larry Hutchins, Norma Watson, Gretchen Wilbur

4-5 Albuquerque Board of Education meeting, Taos, NM--Shirley McCune

6 Northeast Colorado Science Cluster inservice meeting with 1 IHE staff, 7 teachers, and 1 BOCES, Haxton, CO--Paul Nachtigal

6-9 ESP and Site Interviews with 24 principals, 150 teachers, and 4 central office staff, Cincinnati, OH--Jean Conyers, Rhonda Horwitz

7-9 NIE Laboratory site visit, Kansas City, MO--Larry Hutchins, Sharon Koenigs, Norma Watson, Susan Everson, Shirley McCune, Paul Nachtigal

9 Teacher training, "Learning Strategies for Low Achieving Adolescents" with 2 administrators and 36 teachers, Denver Public Schools, Denver, CO--Jean Conyers

9-10 "Making It Happen: Multicultural Non-sexist Educational Conference, Des Moines, IA--Gretchen Wilbur

10 Cotopaxi/Westcliffe inservice session with 10 teachers, 4 administrators, and 1 IHE, Cotopaxi, CO--Paul Nachtigal

10-11 ESP Administrator and Team Training with 29 administrators and principals and 21 teachers, Detroit Public Schools, Detroit, MI--Susan Everson, Lynn King

13 South Dakota Small School Cluster Planning Meeting with 3 IHE and 12 LEA staff, Brookings, SD--Paul Nachtigal

13-14	U.S. Education Department sponsored Secondary School Recognition Conference for 225 educators from McREL states, Kansas City, MO--Lynn King, Larry Hutchins, Susan Everson, Elaine Clemens, Gretchen Wilbur, Tamera White, Dick Bingman
18-21	Urban Education Tri-Network meeting with 22 Network members, 5 consultants, 20 SEAs, 30 LEAs, St. Paul, MN--Sharon Koenigs
20	Participation in Women in Leadership Program, Des Moines, IA--Gretchen Wilbur
21	Meeting with 5 district administrators and 2 teachers to present Economics Unit, Tonganoxie, KS--Lynn King
22	BOCES Strategic Planning meeting, Limon, CO--Shirley McCune
23	Program Development/Data Review, Leavenworth, KS--Gretchen Wilbur
24	Participation in higher education meeting, Gunnison, CO--Shirley McCune
28	Planning session for Missouri Area Supervisors with 1 SEA staff, Columbia, MO--Paul Nachtigal
31	North Dakota Rural Development Advisory Committee meeting with 4 SEA staff and 1 community representative, Bismarck, ND--Paul Nachtigal

June, 1985

3-4 Advocacy training with 20 administrators and teachers, Mason City, IA--Gretchen Wilbur

4 Presentation of Kansas City survey results to steering and advisory committee with 5 administrators and 3 teachers, Kansas City, MO--Dick Bingman

6 Nebraska State Board of Education Strategic Planning meeting, Omaha, NE--Larry Hutchins

Instructional leadership training with 100 principals from Wichita Public Schools, Kansas City, M)--Bob Ewy, Bob Marzano

7 Planning meeting of Annual Rural and Small Schools Conference committee, Colorado State University, with 6 IHE, 2 BOCES, 1 SEA, and 1 LEA superintendent, Ft. Collins, CO--Paul Nachtigal

10-11 Department Chairperson Workshop, Denver Public Schools, with 5 principals and 40 department chairs, Denver, CO--Bob Ewy

10-12 CSMP training workshop with 33 teachers and 3 administrators, Ft. Collins, CO--Clare Heidema

10-13 Review of Rehabilitation Services Administration (RSA) proposals, Regional Department of Education, Kansas City, MO--Lynn King

11-12 Meeting with Lew Rhoades, ASCD, Washington, DC--Shirley McCune

12 Presentation at Cincinnati Thinking Skills Conference with 400 administrators, Cincinnati, OH--Bob Marzano

Completion of training session for curriculum mappers with 2 administrators and 14 teachers, Kansas City, MO--Dick Bingman

13 Conduct Conference on Critical Thinking Skills, Denver, CO--Dick Bingman

Planning with Joan First, National Coalition of Children's Advisory Groups, MO School Class. Prog., Boulder, CO--Paul Nachtigal

Planning technical assistance for staff development program for Millard, Nebraska, Kansas City, MO--Gretchen Wilbur

14 Department Chairperson Workshop, Denver Public Schools, with 5 principals and 40 department chairs, Denver, CO--Bob Ewy

17 Presentation to the Steering Committee of The Counseling Association Denver, CO--Larry Hutchins

Planning with Nebraska Small School Planning Cluster with 1 IHE, 1 SEA, and 4 superintendents, Grand Island, NE--Paul Nachtigal

17-18	Strategic Planning workshop with 10 administrators, 20 principals, 6 board members and LEA staff, Commerce City, CO--Bob Ewy, Jean Conyers
17-21	Conduct CSMP training workshop with 23 teachers and 2 administrators and certify a CSMP trainer, Mason, MI--Clare Heidema
19-21	Participation in 4th Annual Equity Conference, Breckenridge, CO--Gretchen Wilbur, Shirley McCune
	Participate in CEDaR Business Managers' meeting with 15 Laboratory and R&D Center representatives, Washington, DC--Norma Watson
	Participation in Missouri Area Supervisors' meeting with 12 SEA and 2 IHE staff, Jefferson City, MO--Paul Nachtigal, Lynn King
21	Wichita Assessment System workshop (teacher evaluation system) with 20 principals, Laramie, WY--Bob Ewy
21-22	University of Wyoming Principal Training and Evaluation with 50 administrators, Laramie, WY--Larry Hutchins, Karen Benson, Jean Conyers
22-23	Presentation on thinking skills, Washington State School Admininistrators, with 250 participants, Seattle, WA--Bob Marzano
	Conduct CSMP training workshop, St. Louis, MO--Clare Heidema
27-28	Presentation at the National Association of School Boards Midwest Regional Conference, Chicago, IL--Susan Everson
30-7/2	Cotopaxi/Westcliffe writing session with 1 IHE staff, Dillon, CO--Paul Nachtigal, Shirley McCune

July, 1985

3	ESP discussion meeting with 7 administrators from Junction City, Kansas at Kansas City, MO--Susan Everson
5	Co-author paper on "Equity in Rural School Finance" for ED-NIE Conference, Denver, CO--Paul Nachtigal
7-9	Presentation to Colorado Small/Rural School Conference with 30 teachers, 45 administrators, 10 SEA staff, 15 IHE staff, Ft. Collins, CO--Paul Nachtigal
8	NIE negotiation session, Washington, DC--Larry Hutchins, Norma Watson, Sharon Koenigs
8-12	Conduct CSMP workshop at Clayton High School with 12 math teachers/coordinators, St. Louis, MO--Clare Heidema
10	Conduct workshop on rural education at Adams State College with 1 IHE staff, 20 administrators, and 100 teachers, Alamosa, CO--Paul Nachtigal
	Presentation at Ohio Administrator's Academy to 125 LEA/SEA administrators, Columbus, OH--Susan Everson
14-15	Host seminar for the IHE Rural Education Centers with 15 IHE staff, Denver, CO--Paul Nachtigal
15-19	Conduct CSMP workshop with 10 teachers/coordinators, Boston, MA--Clare Heidema
22-24	Conduct work session for MO Area Supervisors, and SEA staff on classification procedures with 12 supervisors, 2 SEA staff, and 2 IHE staff, Kansas City, MO--Paul Nachtigal, Susan Everson, Lynn King
31	Presentation on HOTS to Gifted/Talented Conference for 200 LEAs and SEAs, Des Moines, IA--Bob Marzano

August, 1985

5	Planning/reporting session for activities of Northeast Colorado Science Cluster with 5 superintendents and 1 BOCES director, Sterling, CO--Paul Nachtigal
5-6	CSMP workshop for Guilderland Public Schools with 5 teachers and coordinators, Guilderland, NY--Clare Heidema
7	Cincinnati School Improvement Administrator's Academy with 50 administrators from 27 schools, Cincinnati, OH--Susan Everson
12-14	Kansas City Science Project meeting with 12 science teachers, Kansas City, MO--Dick Bingman
	ED/NIE National Rural Education Forum with 55 IHE staff, 6 DOE staff, 1 NIE representative, and 65 superintendents, Kansas City, MO--Paul Nachtigal
15	Work session, Missouri School Classification Project with 4 IHE and SEA staff, Columbia, MO--Paul Nachtigal
15-17	Participation in World Congress on Educational Futures, San Francisco, CA--Bob Marzano
16	Computer database input and development meeting with 4 Vocational Equity Title IV staff, Kansas City, MO--Gretchen Wilbur
19-23	CSMP workshop for Ellisville Public Schools with 10 teachers and coordinators, Ellisville, MO--Clare Heidema
22	Preservice Keynote Address for 500 LEA secondary staff, Millard, NE--Gretchen Wilbur
	Walsh/Pembina County staff development for 2 IHE staff, 30 administrators, and 290 teachers, Cavalier, ND--Paul Nachtigal
23	Project Innovative Curriculum work session with 8 administrators 110 teachers, 10 SEA staff, and 8 IHE staff, Kenesaw, NE--Paul Nachtigal
23-24	ESP Administrator and Team Training session with 21 teachers and 29 administrators and specialists, Detroit, MI--Susan Everson, Lynn King
26-28	CSMP workshop for Woodridge Public Schools with 20 teachers and coordinators, Woodridge, IL--Clare Heidema
27-28	South Dakota Cooperative Training Program with 50 administrators and 250 teachers, Redfield, SD--Bob Ewy
	Presentation on thinking skills instruction with 50 administrators and 125 teachers, Pierre, SD--Bob Marzano

September, 1985

3	Work with Nebraska Rural Planning Cluster with 15 IHE, SEA, and LEA staff and community members, Hordville, NE--Paul Nachtigal
	Meeting with Meg Stanvage, North Central Association of Colleges and Schools, Boulder, CO--Rhonda Horwitz
4	ESP training with 10 administrators, Alamosa Public Schools, Alamosa CO--Bob Ewy
4-5	Participation in NDN Regional Meeting, Portland, ME--Clare Heidema
4-6	Collaboration meeting with Far West Laboratory, San Francisco, CA--Susan Everson
5-6	Participation in Integrating Math, Science, and Vocational Education Seminar with 50 educators, Omaha, NE--Gretchen Wilbur
6	Presentation to Missouri School Boards Association, Columbia, MO--Larry Hutchins
9	Meeting with Colorado Chief State School Officer, Denver, CO--Larry Hutchins
9-10	Urban Education Network Advisory Committee meeting with 3 SEA, 7 LEA, and 10 Laboratory representatives, Charleston, WV--Sharon Koenigs
10	Leadership training to 60 high/middle school principals, Denver Public Schools, Denver, CO--Bob Ewy
11	ESP planning meeting with 7 administrators, Junction City, KS--Susan Everson
11-12	CEDaR Congressional meetings with Laboratory and Center directors, Washington, DC--Larry Hutchins
12	Work with Kansas State, Kansas Rural Education Cluster, with 1 IHE and 9 administrators, Manhattan, KS--Paul Nachtigal
	Collaboration, planning, database indicator identification meeting with 6 SEA staff, Topeka, KS--Gretchen Wilbur
12-13	U.S. Department of Education Region VII State Policymakers in Education Seminar with 25 legislators and education association and SDE representatives, Kansas City, MO--Susan Everson, Paul Nachtigal, Lynn King
	NIE Director's meeting, Washington, DC--Larry Hutchins
13	Complete Effective Schools Program manuals for participants and trainers, Denver, CO--Bob Ewy
13-14	Training meetings for Kansas City Science Curriculum Alignment Project with 6 administrators and 24 teachers, Kansas City, MO--Gretchen Wilbur
16-18	McREL staff meeting, Vail, CO--all staff

18-19	NIE, Cotopaxi/Westcliffe meeting of Follow-Through Project, with 4 NIE staff and 4 LEAs, Washsington, DC--Paul Nachtigal
23	Participation in Kansas State Department teleconference on equity in education to 5000 educators, Kansas City, MO--Gretchen Wilbur
	Meeting on Aesthetic Education Program materials with 2 consultants St. Louis, MO--Larry Hutchins, Verna Smith
23-25	AEA #3 ESP Follow-up with 15 administrators and 35 teachers, Cylinder, IA--Bob Ewy
25	Participation in School District Administrators Meeting, St. Joseph, MO--Susan Everson
26	McREL Board of Directors meeting with 17 board members, Vail, CO--Larry Hutchins, Norma Watson, Shirley McCune, Pat Fisher
30-10/1	CEDaR meeting with Laboratory and Center directors, Philadelphia, PA--Larry Hutchins, Shirley McCune

October, 1985

1	ESP Administrator Seminar, with 15 administrators, Alamosa, CO--Bob Ewy
1-3	ESP Administrator session and veteran site visits, Fort Madison, IA--Susan Everson
2	Radio interview regarding Southeast Colorado Effective Schools project, Denver, CO--Larry Hutchins
	Participation in meeting of Denver Public Schools, Denver, CO--Larry Hutchins
4	Lunch meeting with Salina, Kansas co-op, Kansas City, MO--Susan Everson
5	Effective Schools update for Wyoming Education Association with 50 teachers, Casper, WY--Bob Ewy
	Workshop, National School Boards Association, Large District Forum, New Orleans, LA--Larry Hutchins, Bob Marzano
	Presentation at Learning Exchange Regional Conference, Kansas City, MO--Susan Everson
7-8	Data gathering for ESP Evaluation Report, McREL, Kansas City, MO--Rhonda Horwitz, Bob Marzano
8	ESP Administrator Session I with 23 administrators, Junction City, KS--Susan Everson
9	Guest on Channel 20 talk show, Time is NOW, Kansas City, MO--Gretchen Wilbur
10	Project Leadership/CASE with 100 participants, Breckenridge, CO--Shirley McCune
11	Disseminate 6,000 Sex Equity Newsletters, Region VII and nationwide, Kansas City, MO--Gretchen Wilbur
	Final revision of ESP manuals, Denver, CO--Bob Ewy
14	Evaluate instrument finalization for HOTS program with 6 assistant superintendents and SEA, Leavenworth, KS--Gretchen Wilbur
	Time-on-Task Presentation, ESP, to 50 teachers, Emmetsburg, IA--Larry Hutchins, Shirley McCune
	Technical assistance to Limon Public Schools, Limon, CO--Shirley McCune
14-17	ESP Year Three Follow-up with 100 LEA (SIP) teams, Cincinnati, OH--Susan Everson

15-16	ESP Training, 1st and 2nd year schools, with 70 teachers and 40 administrators, Omaha, NE--Bob Ewy
17-18	South Dakota American Colleges of Teacher Education Meeting, with IHE representatives, Yankton, SD--Dave Wallace
23-24	Participation in Governors Youth Leadership Conference with 300 participants, Des Moines, IA--Gretchen Wilbur
24	Effective Schools update, Colorado Association of School Executives, with 30 administrators, Breckenridge, CO--Bob Ewy
	Elementary/Secondary Principals Conference with 100 participants, Breckenridge, CO--Shirley McCune
24-26	Participation in AERA Women in Education Conference, Boston, MA--Gretchen Wilbur
26	Missouri School Board Association Workshop on Strategic Planning with 200 administrators, Lake of the Ozarks, MO--Larry Hutchins
28	Planning meeting with Kansas/Missouri curriculum and vocational education representatives, Kansas City, MO--Gretchen Wilbur
29	Rural Education Conference, Manhattan, KS--Shirley McCune, Paul Nachtigal

November, 1985

1	Work session with 100 administrators in Platte County Public Schools, Bailey, CO--Shirley McCune
	Planning and data gathering for 1985 McREL Impact Report, Kansas City, MO--Rhonda Horwitz, Sharon Koenigs, Karen Benson, Lynn King
1-2	Meeting with ASCD, NEA and other professional groups on developing a new taxonomy of thinking skills, Washington, DC--Bob Marzano
4	Participation in Rural Education Clusters meeting, Burlington, CO--Shirley McCune
5	ESP planning session with 6 administrators, Shawnee Mission, KS--Susan Everson
	Iowa planning meeting to coordinate spring '86 conference on Educational Equity, co-sponsored by McREL, Drake University, IA Association of School Boards, Midwest DAC, Des Moines, IA--Gretchen Wilbur
5-6	Planning for the MO Clarification Project, with 5 SEA staff, Columbia, MO--Paul Nachtigal
	Strategic planning session with 20 SEA staff, Lincoln, NE--Shirley McCune
7	Conduct Kansas/Missouri schema planning meeting, Kansas, City, MO--Gretchen Wilbur
8	Presentation to the Wyoming School Boards Executive Committee, with 150 board members, administrators, teachers, and parents, Caspar, WY--Shirley McCune
	Business management meeting with St. Louis McREL staff, St. Louis, MO--Norma Watson, Sharon Koenigs, Verna Smith, Clare Heidema
9	Participation as a resource person for the School District of Kansas City, Missouri's Planning/Implementation Conference with 150 teachers and administrators, Kansas City, MO--Lynn King
11	Aesthetic Education Program materials meeting with consultants, Denver, CO--Larry Hutchins
	Curriculum planning session with 4 representatives of Weber State College, Ogden, UT--Shirley McCune
12	ESP Phase I Training with 12 administrators and 100 teachers, Omaha, NE--Bob Ewy
	Technical assistance to Taos Public Schools, Taos, NM--Paul Nachtigal

	Meeting with Kansas State Board of Education and Kansas SDE on implications of curriculum trends, Topeka, KS--Shirley McCune
12-13	North Dakota Regional Forums on Educational Issues, Park River and Steele, ND--Larry Hutchins
	ESP Site Visits to 7 veteran middle school teams with 30 teachers and 10 administrators, Detroit, MI--Susan Everson, Lynn King
13	ESP Phase II Follow-up with 5 administrators and 20 teachers, Omaha, NE--Bob Ewy
14	Participation in seminar of school effectiveness for Nebraska Association of School Boards with 125 school board members, Omaha, NE--Bob Ewy
14-15	ESP Session I for Teams, with 30 administrators and 70 teachers, Junction City, KS--Susan Everson, Lynn King
18	Disseminate R&D Notes throughout the region and country, St. Louis, MO--Verna Smith
	Meeting with Bob Beecham, Nebraska SDE, Lincoln, NE--Larry Hutchins
	Work with planning clusters with SDE, IHE and 200 LEA representatives, Trumbull and Marquette, NE--Paul Nachtigal
18-19	Conduct CSMP training for 2 LEAs, with 20 teachers and 25 administrators, Enterprise and Pendleton, OR--Clare Heidema
19	Presentation to Colorado Evaluators Association on Nontraditional Competencies, Denver, CO--Bob Marzano
19-20	Host Rural Seminar on Alternative Delivery Systems, with 15 SEA, 7 ESU, and 20 administrators, Lincoln, NE--Larry Hutchins, Paul Nachtigal, Karen Benson
	Great River AEA Year Two Team and Administrator Training with 50 teacher and administrators, Ft. Madison, IA--Susan Everson
	Presentations to Regional Workshops on Futuristic Planning sponsored by the North Dakota Council of School Administrators, Dickinson/Stanley, ND--Shirley McCune
20	Workshop for effective boards on Effective Schools, with 7 ESUs and 30 board members, Columbus, NE--Bob Ewy
21	Workshop on instructional leadership and styles, with 7 ESUs and 40 administrators, Columbus, NE--Bob Ewy
22	Participation in Student Leadership Retreat, Des Moines, IA--Gretchen Wilbur

24-25	Participation in CEDaR Annual Meeting for Laboratories and Centers, San Diego, CA--Larry Hutchins
25-26	Participation in R&D Notes Regional conference on "Teacher Quality", with 7 SEA, 7 IHE, and 14 teacher representatives, Denver, CO--Larry Hutchins, Shirley McCune, Bob Ewy, Karen Benson
26	Rural School/Rural Development Advisory Cluster meeting with 5 SEA, 2 IHE, and 3 community representatives, Bismarck, ND--Paul Nachtigal
	Presentation to Regional Administrators Conference, Casselton, ND--Paul Nachtigal

APPENDIX A. RED NOTEWORTHY

Winter, 1984-5

what's Noteworthy on

[illegible] THE SCHOOL YEAR

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McREL's resource publication for educators

McREL

QUALITY EDUCATION

THE EFFECTIVE SCHOOLS PROGRAM

NOTEWORTHY NOTES

This issue of *Noteworthy* is devoted to information the McREL staff has developed as part of their Effective School Program (ESP). The first six articles are what we call "folio's," i.e., handouts we encourage participants to disseminate to teachers who have not participated in the program. Each of the articles or folios journalistically reviews the research and makes specific suggestions teachers can use. Accompanied by appropriate staff development strategies, these handouts are a useful way to help teachers understand and implement elements of the research on effective schools.

Each of the six folios have been printed separately so that they can accompany a short workshop without overloading someone with too much information. These separate handouts are also available from McREL.

In addition to the folios, this issue of Noteworthy contains an article on technique called "Coaching." This technique represents a powerful addition to the staff development repertoire. It is fashioned to increase teacher-to-teacher collaboration and feedback for individual teachers about the effectiveness of their instructional methods. We urge school principals or group of teachers to try the system. If properly introduced and supported, it will make a significant difference in the successful implementation of other efforts to improve schools.

Finally, we have printed a detailed outline of the Effective School Program, itself. Many people want to know more about the program and we thought this would be one way to meet that interest.

If you or your school would be interested in learning even more about it, contact us.

McREL continues to stand ready to help state departments, intermediate agencies, professional associations, school districts, principals, teachers and parents learn about and use research and development to improve education. If we can help you, please let us know.

C. Larry Hutchins
Executive Director

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NOTEWORTHY is a publication of The Mid-continent Regional Educational Laboratory (McREL). McREL is a non-profit organization, funded, in part, by contracts and grants from the National Institute of Education (NIE). It serves a seven-state area: Colorado, Kansas, Missouri, Nebraska, North Dakota, South Dakota, and Wyoming. Its mission is to help improve educational practice in the seven-state region and further the equitable distribution of improved educational quality across all groups of students. Much of the research cited in NOTEWORTHY has been sponsored by *The National Institute of Education*. The opinions expressed do not necessarily represent official NIE or Department of Education Policy.

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This issue of *Noteworthy* is dedicated to Lochran C. Nixon, Jr. At his death in September of 1983 he was the Executive Director of the Mid-continent Regional Educational Laboratory (McREL). "Nick," as he was known to his colleagues, had been with McREL since 1969, serving first as Deputy Director and then as Executive Director. He was known to his co-workers as a gentle, sincere and highly principled man. He was devoted to the mission of educational improvement and the role of research and development in the improvement process. He held the regional laboratory together through its most trying times, helping it to emerge as a strong institution serving schools and colleges across the country.

His doctorate was from Auburn University, not far from his home town. Prior to coming to McREL he had served as Superintendent of the North Brevard, Florida School District (adjacent to Cape Canaveral) and as an Assistant Professor at Auburn.

"Nick" was best known to his wife, Gloria, and his daughters Kelly and Kimberly; to them he was a dedicated husband and father. He had strong faith in his family and church, where he enjoyed singing and discussing theology.

He is missed.

C. Larry Hutchins
Executive Director, McREL

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Beginning the School Year

Recent educational research indicates that the way a teacher begins the school year is crucial to student success. (See the Research Reports section of this document for a description of some of the major studies on beginning the school year.) A well-run first few days actually can trigger higher levels of student achievement through the end of the year, and a poorly run beginning may set the stage for lowered achievement.

Why? Because an effective beginning:

- ensures that students know and observe the rules and procedures for their classroom so they stay on task. They understand what they are supposed to be doing;
- teaches students how to behave—as a result less time is lost to disciplinary activities;
- motivates students by indicating that their school experiences will be pleasant and that they will be treated fairly; and,
- increases students' expectations by helping them believe they can be successful.

What must a teacher do to take advantage of these research-based findings about the beginning of the school year?

1. Be Clear

- Make sure your building has clearly expressed rules that facilitate learning; these rules should be systematically taught and enforced. The consequences of violating the rules should be clear and uniformly applied. (See the box on the back page and the McREL Quality Schools Program folio on Discipline for more suggestions on setting up rules.)
- Identify all the "standard operating procedures" you use to organize and manage your classroom. (See the Beginning the School Year Checklist on the inside pages.) All rules and standard operating procedures should be taught to the students—starting with those rules most likely to increase student engagement.

2. Be Firm

- Be sure everyone is taught the rules. Check for understanding.
- Also be sure that compliance with the rules and standard operating procedures is monitored closely the first few days and weeks. Ignore no infractions. Uniformly and fairly apply the sanctions for failure to comply. (It's easy to let up later; hard to get tougher.)

3. Be Friendly

- Make the school a pleasant place to be. No one wants to go to a place that's unpleasant and unsupportive.
- Introduce some activities that are fun the first few days; this helps motivate students.
- Recognize the students' needs—for exercise, breaks, and for getting acquainted with one another and with you.

4. Be Positive

- Get across the idea to your students that they will be successful in your classroom; tell them you expect everyone to be successful and that you're there to help them succeed.
- Avoid situations in which failure is likely—heavy duty diagnostic tests, or oral quizzes that too quickly let only the top kids succeed.
- Talk about the "multiple abilities" they will need to be successful in your classroom (See the McREL Quality Schools Program folio on Instruction for more information.)
- Arrange activities at which they all can be winners.

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McREL is a public, non-profit organization, funded in part by contracts and grants from the National Institute of Education (NIE). The McREL staff members who contributed to this folio are: C.L. Hutchins, Susan Everson, Robert Ewy, Susan Lynch and Barbara Kessler. Other contributors include: Linda Shalaway.

RESEARCH REPORTS

Before School Starts

In extensive work at the University of Texas Research and Development Center for Teacher Education, Carolyn Evertson, Edmund Emmer, Linda Anderson, and their colleagues observed elementary and junior high school classrooms during the first days and weeks of school, and at periodic intervals thereafter. They reported that prior to the start of school, effective teachers:

- developed a list of rules, procedures, and routines for students;
- decided upon consequences for breaking rules and procedures; and
- arranged classroom space and materials to suit their instructional needs.

A study at the Institute for Research on Teaching at Michigan State University showed that elementary teachers typically begin planning for the next school year ten days before school starts. Chris Clark and his colleagues reported that during their early planning, teachers:

- made sure they had enough desks and chairs;
- decorated their classrooms with attractive bulletin boards;
- rearranged files and curriculum materials;
- planned seating and furniture arrangements to be consistent with their instructional goals and activities; and
- attended inservice education sessions.

The First Day of School

The old adage, "first impressions count," certainly holds true for classrooms. Students actually experience a form of "imprinting" on opening day, according to Nancy McKee of the University of Texas R&D Center. McKee contends that within the first few hours students pick up on teachers' demands and expectations. Further, a new student will also catch on quickly to the teacher's expectations when he or she enters a classroom already in progress. McKee explains that if classroom activities are flowing smoothly, the student will think that is the normal state; if things are disorganized and chaotic, the student will think that is the norm and will behave accordingly.

In the Texas studies, Evertson, Emmer, and Anderson found that on the first day of school successful teachers:

- established themselves immediately as classroom leaders;
- planned the first day around maximum contact with and control over students;
- gave students interesting activities right away;
- eased students' entry back to school with a relaxed, but work-centered climate;
- planned mostly whole-class activities for the first day or so;
- presented the rules, procedures, and daily classroom routines;
- systematically taught these rules, procedures, and routines and gave students the chance to practice them;
- made sure students understood the consequences for not following rules, procedures, and routines; and
- clearly communicated high expectations for good work and good behavior.

The First Weeks of School

Walter Doyle of North Texas State University has identified a beginning-of-the-year "rhythm" that characterizes elementary and secondary classrooms. As he described it, misbehavior gradually increases at the beginning of the year until a critical point is reached. At this point, if a teacher can successfully handle this early "testing," the incidences of misbehavior decrease and stablize at a much lower level throughout the year. But if a teacher fails to handle misbehavior at this critical point, it will increase in frequency and seriousness; the teacher will lose control of the class. The way to avoid this problem is to spend time teaching routines and rules of conduct during the first few weeks of school and to enforce these rules and routines throughout the year. Teachers who stop misbehavior early have low misbehavior rates all year. Even the amount of off-task behavior in the first weeks of school predicts what will happen during the rest of the year. The key is for teachers to be consistent and predictable in responding to inappropriate behavior, thus students will not continually test them.

The Texas researchers found that during the first few weeks, effective teachers:

- continued to teach rules and procedures;
- consistently enforced rules and procedures;
- continued to communicate their expectations for student work and behavior;
- closely monitored student work and behavior;
- dealt with inappropriate behavior quickly and consistently;
- organized instruction to maximize student success and involvement;
- gave clear, specific directions for activities and assignments; and
- held students accountable for their work.

Readings

Classroom Management. Walter Doyle. A Kappa Delta Pi Publication, 1980.

"Effective Classroom Management at the Beginning of the School Year." Edmund T. Emmer, Carolyn M. Evertson, and Linda M. Anderson. *Elementary School Journal*, 80(1980), pp. 218-28.

Organizing and Managing the Elementary School Classroom. Carolyn M. Evertson, Edmund T. Emmer, Barbara S. Clements, Julie P. Sanford, Murray E. Worsham, and Ellen L. Williams. The Classroom Organization and Effective Teaching Project, The Research and Development Center for Teacher Education, The University of Texas at Austin, 1981.

Organizing and Managing the Junior High School Classroom (R&D Report No. 6151). Edmund T. Emmer, Carolyn M. Evertson, Julie P. Sanford, Barbara S. Clements, and Murray E. Worsham. The Classroom Organization and Effective Teaching Project, The Research and Development Center for Teacher Education, The University of Texas at Austin, 1982.

Planning in the First Weeks of School. Christopher M. Clark. Research Series No. 56, Institute for Research on Teaching, Michigan State University, East Lansing, MI.

Socratic Suggestions for the Mind-Set of Teaching: A Manual for Those New to the Profession of Teaching Concerning the Establishment of Classroom Organization During the First Days of School (R&D Report No. 4102). Nancy McKee. The Research and Development Center for Teacher Education, The University of Texas at Austin, 1978.

Resource Materials

Helping Teachers with Classroom Management: Selected Workshop Activities (R&D Report No. 6051). Julie P. Sanford, Barbara S. Clements, and Edmund T. Emmer. The Classroom Organization and Effective Teaching Project, The Research and Development Center for Teacher Education, The University of Texas at Austin.

The Teacher's Checklist: A "Flight Plan" for Effective Teaching and Classroom Management. Published by the Missouri Department of Elementary and Secondary Education, Arthur L. Mallory, Commissioner of Education, 1981.

What's Noteworthy on School Improvement, Summer, 1981. The Mid-continent Regional Educational Laboratory, Kansas City, MO.

I. Beginning Class
_____ A. Roll Call, Absentees
_____ B. Tardy Students
_____ C. Academic Warm-Ups or Getting Ready Routines
_____ D. Distributing Materials
_____ E. Behavior During Class Opening (Elementary)

II. Room/School Areas
_____ A. Shared Materials
_____ B. Teacher's Desk
_____ C. Water Fountain, Bathroom, Pencil Sharpener
_____ D. Student Storage/Lockers
_____ E. Student Desks (Elementary)
_____ F. Learning Centers, Stations (Elementary)
_____ G. Playground (Elementary)
_____ H. Lunchroom (Elementary)

III. Setting up Independent Work
_____ A. Defining Working Alone
_____ B. Identifying Problems
_____ C. Identifying Resources
_____ D. Identifying Solutions
_____ E. Scheduling
_____ F. Interim Checkpoints

IV. Instructional Activities
_____ A. Teacher/Student Contacts
_____ B. Student Movement in the Room
_____ C. Signals for Students' Attention
_____ D. Signals for Teacher's Attention
_____ E. Student Talk During Seatwork
_____ F. Activities to Do When Work is Done
_____ G. Student Participation
_____ H. Laboratory Procedures
_____ I. Student Movement in and out of Small Group (Elementary)
_____ J. Bringing Materials to Group (Elementary)
_____ K. Expected Behavior in Group (Elementary)
_____ L. Expected Behavior of Students not in Group (Elementary)

BEGINNING THE SCHOOL YEAR CHECKLIST

Use this checklist to identify procedures you follow in your classroom. Put a check mark in the space to the left of each item for which you do have a set procedure. Place an asterisk next to those items you do not have procedures for but feel you should. Circle items you feel should be taught on the first day of school.

V. Ending Class
_____ A. Putting Away Supplies, Equipment
_____ B. Cleaning Up
_____ C. Organizing Materials Class
_____ D. Dismissing Class

VI. Interruptions
_____ A. Rules
_____ B. Talk Among Students
_____ C. Conduct During Interruptions or Delays
_____ D. Passing Out Books, Supplies
_____ E. Turning in Work
_____ F. Handing Back Assignments
_____ G. Getting Back Assignments
_____ H. Out-of-Seat Policies

VII. Other Procedures
_____ A. Fire Drills
_____ B. Lunch Procedures
_____ C. Student Helpers
_____ D. Safety Procedures

VIII. Work Requirements
_____ A. Heading Papers
_____ B. Use of Pen or Pencil
_____ C. Writing on Back of Paper
_____ D. Neatness, Legibility
_____ E. Incomplete Work
_____ F. Late Work
_____ G. Missed Work
_____ H. Due Dates
_____ I. Make-up Work
_____ J. Supplies
_____ K. Coloring or Drawing on paper (Elementary)
_____ L. Use of Manuscript or Cursive (Elementary)

IX. Communicating Assignments
_____ A. Posting Assignments
_____ B. Orally Giving Assignments
_____ C. Provision for Absentees
_____ D. Requirements for Long Term Assignments
_____ E. Returning Assignments
_____ F. Homework Assignments

X. Monitoring Student Work
_____ A. Total In-class Oral Participation
_____ B. Completion of In-class Assignments
_____ C. Completion of Homework
_____ D. Completion of Stages of Long-term Assignments
_____ E. Monitoring All Students

XI. Checking Assignments in Class
_____ A. Students Exchanging Papers
_____ B. Marking and Grading Assignments
_____ C. Turning in Assignments
_____ D. Students Correcting Errors

XII. Grading Procedures
_____ A. Determining Report Card Grades
_____ B. Recording Grades
_____ C. Grading Stages of Long Term Assignments
_____ D. Extra Credit Work
_____ E. Keeping Records of Papers/Grades/Assignments
_____ F. Grading Criteria
_____ G. Contracting with Students for Grades

XIII. Academic Feedback
_____ A. Rewards and Incentives
_____ B. Posting Student Work
_____ C. Communicating with Parents
_____ D. Students' Record of Grades
_____ E. Written Comments on Assignments

TIPS FOR TEACHERS

Before Opening Day

- Do your homework—read your policy manual and reacquaint yourself with the rules and procedures of your school: opening and closing hours, attendance policies, fire drill routines, evacuation procedures, cafeteria rules, etc.
- Send a letter home with students and parents at preregistration that includes the school phone number, your phone number, conference hours, lunch procedures, and other important information.
- Prepare first day plans and materials. Know the instructional objectives for your school and your grade or class. Review the curriculum guides and the textbook series you will be using. Prepare to make the first day a real day of school; prepare written lesson plans and have the necessary materials ready for students to use.
- Plan to start with a fairly traditional physical classroom setup and a temporary seating chart. This will help you learn students' names and see how your room will "work" when the tables and chairs are occupied.
- Have all classroom materials stored out of the way of traffic areas.
- Provide space for students to store their belongings.
- Add a personal touch to your room with plants, bulletin board decor, posters, etc. Make the room a pleasant place to be.
- Develop a signaling system to call attention to the importance of following procedures. For example, you could use the hand-signal "T" to indicate that a student isn't spending his or her time wisely and should get back on task. You might have students leave messages in a box on your desk to identify things they want help with. You can set up a system for when you expect silence, and when you will tolerate "quiet"—such as whispering.
- Prepare a list of materials that students are expected to bring to each class period.
- Plan procedures for handling new students.
- Plan the beginning and ending of class periods.
- Develop procedures for distributing instructional materials and supplies at the beginning of class periods and for collecting them at the end of class periods.
- Set procedures for laboratory class periods (cleanup of work areas or equipment, safety routines, distributing supplies and materials).
- Set procedures for handling homework assignments.

The First Day

- Arrive early so you will have time to greet your colleagues and students who arrive early. You should be in your room before students arrive.
- Greet students with a smile. Have your name on the board so that students can learn to pronounce and spell it immediately.
- Be in control as soon as the first children enter the room; if they don't all come in at once, have some activities ready that will keep early students busy—such as writing a story or drawing a picture about what they did during the summer, some of their favorite things to do, or something about themselves to help you get to know them better.
- Insist that students be seated when they arrive. You need to establish a good working climate as soon as possible.
- Review your main tasks. You need to establish a well-disciplined classroom in which you have the attention of students, help them establish good work habits, and work with groups as well as individuals.
- Check attendance, having each student raise his or her hand as his or her name is called.
- Conduct a get-acquainted exercise.
- Keep beginning academic exercises brief and pleasant, but get the routine of the day started.
- State classroom rules and procedures positively and begin giving students opportunities to practice them.
- Post classroom rules for all students to see.
- Teach daily routines, such as warm-up and end-of-day exercises, and procedures for moving from one activity to another.
- Don't rush into heavy academics the first day or two. Encourage students by reviewing things they know and complimenting them for knowing so much; when academics are introduced, choose activities that will enable students to succeed.
- Maintain maximum contact with and control over your students; be "ever-present," monitoring and watching.
- Handle behavior problems/disruptions promptly.
- Set up a "buddy" system for learning the rules for students who arrive late. As new students enter the room, a student who has learned the rules will be assigned to teach the rules to the newcomer. This will provide added incentive for students to learn the rules.

The First Few Weeks

- Study the records of your students. You need to know more about their characteristics, achievements, capabilities, and problems.
- Take advantage of every opportunity to meet with parents. Try to make sure they understand your goals and expectations for students. Don't let your first contact with parents be in connection with a negative incident. Respond to parents' questions quickly and honestly and suggest ways they can help with students' assignments.
- Keep a folder for every student and record plenty of observations and grades. Make sure you have enough information to assess each student's ability and effort fairly.
- Continue to explain, re-teach, and enforce rules and procedures.
- Start classes on time.
- Always be prepared; there is no substitute for preparation. Try to think of ways to work with various groups of students (advanced students, low achievers) ahead of time so they won't be left out or monopolize your attention in class.
- Motivate and challenge students with unusual projects and activities.
- Hold students accountable for their work.
- Never leave the classroom when students are present.

TIPS FOR ADMINISTRATORS

One of the most important leadership tasks for the principal is to get school off to a good start each year. Here are a few suggestions to help with that task:

- Work with your faculty and staff to establish and/or remind them that the building has a set of clearly defined rules that are to be enforced by all.
- Each year be sure to tell or remind all teachers why their beginning school year activities are so important (use this document to help with this task).
- Ask the teachers to go over the standard operating procedures they use in their classrooms (see the checklist inside) and decide which ones should be taught on the first day of school or within the first week.
- Discuss the steps necessary in teaching the rules and standard operating procedures; that is: 1) explain the rules, 2) model situations when the rules are followed and are broken, 3) check for understanding, 4) provide for guided practice and corrective feedback, and 5) explain the consequences of breaking the rules.
- Create the expectation that the rules and standard operating procedures will be top priority for all teachers on the first day and during the first week of school.

Parents often accompany their child to school on the first day. This creates a special problem for the school that is trying to create a very orderly environment on the first day of school. The parents feel obliged to talk with the teachers and vice versa—which disrupts the control the teacher needs to exert for the first few hours.

One solution to this problem is to give arriving parents a "back-to-school kit." The kit should include:

- A letter of welcome from you, expressing your pleasure in their interest in the school. This letter may also be used to explain what your beginning-the-school-year focus is and why it is so important to teach the rules and standard operating procedures during early contact with the students.
- A form that the parents can use to write out special instructions regarding their child. Let them know they are welcome to make an appointment with you or their child's teacher to discuss any special concerns or to observe their child's classroom.
- A schedule indicating the best time for them to make medical appointments for their children so they won't interfere with peak learning times.
- A list of the rules for the building and for each classroom and an explanation of the support you need from parents to help enforce the rules.

TIPS ON RULES

Having clearly stated, well-enforced rules is key in getting the school year off to a good start. Below are a few tips administrators and teachers can use in setting rules for their school.

- Select only a few rules—neither you or the students will be able to remember a long list.
- Select rules because they establish an orderly environment and contribute to successful learning—as important an issue as gum chewing may be, it probably doesn't significantly impede learning.
- Make the rules as unambiguous as possible; they should be stated behaviorally—"Keep your hands and feet to yourself" is more clear than "no fighting."
- Select only rules that all adults in the building accept and are willing to uniformly enforce—as soon as students figure out there is a double standard they will work to test the limits.

Possible Building Rules

1. Listen carefully and follow the instructions of adults in the building.
2. Keep your hands and feet to yourself.
3. No running or loitering.
4. Respect other people's property and person.
5. Be on time to class and with assignments.
6. Speak only as loudly as necessary.
7. Treat others as you would like to be treated.
8. Display respect for each other and for authority.
9. Laugh *with* anyone, but laugh *at* no one.
10. Every student is responsible for his or her own learning.
11. Do not interfere with people who are working.

Time Management

Time management has become an important issue in education. For example the phrase "time on task" has been used so frequently, it has become the focus of many school improvement efforts. Time is a resource in short supply in every school, and it is a resource with a great effect on learning. The best materials, the latest equipment, and the newest instructional programs make little difference if students don't have time to learn and teachers don't have time to teach. (The "Research Reports" section of this document briefly describes findings from a few of the studies that have contributed to our understanding of the important role time plays in determining student achievement.)

What can educators do to increase learning time? Lengthen the school day? Lengthen the school year? As desirable as these options might appear, they are costly and pose new problems concerning teaching contracts, professional expectations, facilities management, etc. Another solution is to use more efficiently the time that is already available; research has shown that teachers and administrators can make better use of the school day.

The first steps toward improving time use in schools is to break the school day down into different categories of time. This is important because how you improve your use of time depends on the category of time you want to change. Figure 1 (on page 2) identifies a number of different divisions of school time. (Following are definitions.)

1. *School Day:* The school day is the total amount of time in one day that students are required to be at school. The research literature shows a positive relationship between the length of the school day and student learning.

2. *Absent Time or Time Lost to Absenteeism:* Absent time is the time students are not present during the required hours of the school day. Regular attendance at school is associated with student achievement. Schools lose a considerable number of student-hours to absenteeism. Time that students are suspended should also be taken into account in this category.

3. *Nonacademic Building Time:* This is time scheduled building-wide for activities that are not directly related to learning. These activities include announcements, recess, lunchtime, passing time, and assemblies. The greater the portion of the school day spent on these activities, the less time there is for instruction. Obviously most of these can't be done away with, but the more efficiently they are handled, the more class time teachers have.

4. *Class Time:* When you take away the time lost to nonacademic activities and absenteeism, the time remaining is class time: the time we give teachers to teach. This time should equal the combined amount of time assigned to specific subjects, but because assigned time is often lost to transitions between subjects and management activities, often it doesn't. (Assigned time would be a subdivision of class time, i.e., the class time allowed for each subject studied.)

5. *Nonacademic Class Time:* During the time teachers have students in their classrooms there is still the potential for considerable lost time due to taking roll, passing out materials and supplies, dealing with individual students while the rest of the class waits, etc.; this time might be thought of as management time. A second type of nonacademic class time is the time lost to such things as social activities, transitions between lessons, and time that is simply lost to confusion or disorder.

6. *Instructional Time:* The time available for instruction after we subtract class time lost to nonacademic activities and absent time could be called instructional time. Some research studies suggest that this instructional time may be as low as 40-60% of the school day.

7. *Nonengaged Time:* Even if the teacher is teaching or intends for the students to work, some students may not be paying attention or doing what they are

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McREL is a public, non-profit organization, funded in part by contracts and grants from the National Institute of Education (NIE). The McREL staff members who contributed to this folio are: C.L. Hutchins, Susan Everson, Robert Ewy, Susan Lynch, Robert Marzano and Barbara Kessler. Other contributors include: Linda Shalaway.

supposed to be doing. Obviously, when this happens, no academic learning is taking place.

8. *Engaged Time or Time on Task:* The portion of instructional time during which students are actively attending to the work the teacher has assigned is called time on task. When this time is looked upon as a percentage of the available day, it represents the school's academic efficiency. (McREL has a procedure for estimating academic efficiency; contact McREL for further information.)

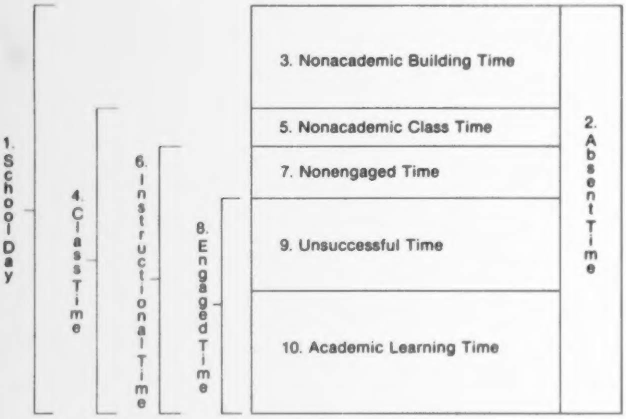

Figure 1.

9. *Unsuccessful Time:* Even when they are engaged students may not be learning because they are not successful at what they are doing. Causes of failure may include materials that are inappropriate to student need, students not having mastered the skills prerequisite to learning a concept, tasks that are not understood, and tasks which can be completed without mastering the essential skills or knowledge; students may also seem to be succeeding, but are actually faking their way through the task by copying from a neighbor, etc.

10. *Academic Learning Time (ALT):* Academic Learning Time is the assigned time in which the student is actively engaged in the instructional task and is appropriately successful, between 60-90% of the time, working on an activity which is tied to a stated learning outcome. Research suggests that for students to achieve, a relatively high proportion of their engaged time must result in success. (See the McREL Quality Schools Program folio *Instruction* for more information on success rate.)

11. *The School Year:* The length of the school year may be calculated by multiplying any one of the positive (black) divisions of time listed above by the number of full days that school is in session; calculating "full days" should allow for days on which there are early dismissals for inservice activities or for days when students are excused for extracurricular activities. For example, one way to calculate the length of the school year would be to multiply a building's daily engaged rate (or time on task) by the number of full days that students are in attendance. (You may be surprised how short the school year is in this case.) Another estimate of the school year would be reached by multiplying the daily instructional time by the number of full student days. Calculating the length of the school year in any of these ways is particularly helpful in comparing the usefulness or potential import of different strategies for using time more efficiently.

Increasing Time for Teaching and Learning

Given all the various ways time is lost and used, what can teachers and administrators do to ensure that there is time to teach and that students have time to learn?

First, determine which of the 11 divisions of time your school wants to work on. The important thing to remember is that you can increase the school day, class time, instructional time, time on task, and academic learning time by shrinking the time lost to any of the other types of time.

This folio will focus on strategies for increasing class time. Other McREL Quality Schools Program folios, *Beginning the School Year, Motivation, Discipline* and *Instruction* provide suggestions for handling engaged time and academic learning time.

Increasing the School Day – The Four Day Week. Many recommendations have been made to lengthen the school day. Whether this is feasible depends on a number of considerations, including the availability of money and the nature of teacher contracts. One innovative way of lengthening the day without necessarily increasing the total time available during the week is to work a longer day but a shorter week – i.e., a four day school week. This arrangement has been tried in a number of communities – usually with positive effects. One by-product of this arrangement has been the reduction of a variety of nonacademic building interruptions achieved by scheduling athletic and extracurricular activities on the fifth day. Schools that have tried this approach have reported declines in absenteeism (both student and staff) as well as student achievement gains.

One important finding about the four-day school week program has been the report that the lengthened day does not seem to be dysfunctional for young children, i.e., kindergarteners and first graders; they seem unaffected by the longer day. (See the Winter, 1982 issue of *Noteworthy* for a report on how the four-day school week is being used in Colorado.)

Increasing the School Day – Homework. Time students spend at home, working on their academic assignments, clearly can add to the amount of time engaged in learning. Many schools are developing homework policies to increase the length of the effective school day. The only caution that should be expressed relates to the issue of success: if students are not successful at what they are doing, i.e., if homework is frustrating or confusing, the risk is that the effort will be dysfunctional. For example, many students easily give up when they are frustrated by an assignment; such an experience can add measurably to their sense of low esteem and failure. In the long run, this effect retards rather than advances learning. It is, therefore, important that the assignment given as homework, especially to low achieving students, be thoroughly explained and a period of guided practice and feedback with the work precede the take-home assignment. The frequent practice of assigning work the teacher did not have time to cover in class could be quite counterproductive for most students. New work might be appropriate for high achievers; it could be the challenge these students need to avoid the boredom of repetitious, dull work that they already do successfully. To a high achieving student, working a hundred homework problems that he or she already knows how to do well and rapidly could prove as dysfunctional an assignment as a confusing problem would be to a low achieving student.

Increasing the School Day by Reducing Absent Time. More time in the school day may also be gained by reducing absent time. There are many strategies for reducing the time lost to student absences. The following strategies are summarized from a pilot study of 28 California school districts sponsored by the California State Department of Education.

1) School-to-home contact
    - Include articles on the importance of regular school attendance in parent newsletters or on food service menus; use back-to-school nights, P.T.A. meetings, and all other available opportunities to emphasize the importance of attendance.
    - Place responsibility for attendance on parents and students; develop a brochure that summarizes attendance laws and requirements and send it and other attendance materials home with students.
    - Teachers should emphasize the importance of regular school attendance when they meet with parents.
    - Telephone parents/guardians immediately to verify student absences and to determine the reasons for the absence as soon as the absence is noted in the morning. Use parent volunteers or school aides to contact parents/guardians; develop a standardized format for telephone calls to help volunteers and aides efficiently complete the calls. Use bilingual aides to contact parents/guardians with limited English-speaking ability. New computer controlled telephone systems are available for delivering recorded messages to all parents of absent or tardy students.
    - Make home visits concerning student absences if parents/guardians cannot be contacted by telephone.
    - Send warning letters to students and parents when student has been absent a specific number of times (excused or unexcused absences).
2) Rewards for good attendance
    - Award T-shirts or attendance certificates or commendation letters for perfect or high attendance.
    - Hang banners or give special parties for classrooms with the highest quarterly or monthly attendance.
    - Allow perfect attenders to opt out of one final exam of their choice (final grade would then be based on classwork to date).
    - Publicize perfect attendance awards in the local newspaper.
    - Develop a relationship with local merchants (e.g., fast food restaurants, amusement parks, etc.) so you can award their services as prizes for near perfect attendance.
3) Developmental strategies
    - Review student attendance records on a weekly basis to catch emerging absence patterns; refer students with frequent absences to a counselor, administrator, or school social worker to determine reasons for absences and tardies.
    - Provide guidance and counseling for truants; provide tutoring to help them achieve in school.
    - Identify attendance problems early; use guidance personnel in elementary schools.
    - Set up an "open classroom" program in which a diversified and meaningful school environment is designed to help students become self-motivated learners responsible for their own behavior.
    - Provide Saturday school programs or late afternoon classes (3-6 p.m.) for students who cannot attend full-day classes.
    - Expand student electives and options to include work experience, independent study, continuation and alternative schools, and opportunities for nontraditional experiences.
4) Consequences for poor attendance
    - Clarify school standards related to attendance. Involve parents, students and school staff in developing policies that specify expectations and delineate outcomes of good-vs.-poor attendance. Publicize the policies and enforce them consistently.
    - Encourage teachers to include classroom participation in their grading criteria.
    - Initiate an in-house suspension program; use a "no-frill" room on campus; you might establish a time schedule for this program that does not correspond to the usual school schedule.
5) Staff Development
    - Display attendance graphs in the faculty room to show attendance comparisons between current and past school years.
    - Provide homeroom teachers with prepared lesson on school attendance.
    - Review studies on attendance, truancy, dropouts, and alternatives to suspension and report findings to staff members.
    - Provide staff development in discipline, communications training, "crisis counseling," and behavior modification strategies.
6) Cooperative community efforts
    - Increase efforts to create public awareness of attendance problems in the community through newspaper articles and public service announcements on radio and television.
    - Elicit the cooperation of doctors, dentists, and other allied health professionals in scheduling appointments after school. (As will be discussed later, teachers and principals working together can

set up staggered blocks of "academic learning time" and inform parents that these blocks of time are periods during which they would rather medical or other appointments not be scheduled. Most parents will cooperate; they are pleased to have timelines for scheduling appointments).

- Set up a telephone hotline in the school district attendance office which allows community residents to anonymously report apparent truants; recruit senior citizen volunteers to monitor the phone lines; include the hotline number on phone number stickers distributed to community residences with police, fire, and other emergency numbers.
- Develop an attendance improvement plan in cooperation with local agencies, police, probation departments.

Increasing Class Time by Reducing Nonacademic Building Time. Nonacademic building activities, though important, often cut unnecessarily into class time. Teachers are sensitive to the activities that cause them to lose time. At a staff meeting, get teachers (and principals) to identify the time lost to building interruptions and brainstorm strategies for reducing lost time. Here are some suggestions:

- Use T.V. screens or paper handouts for announcements instead of the loudspeaker system. If loudspeaker announcements must be made, schedule them during lunch hour or at a set time that does not cut into a particular class period.
- Obviously students need time to eat, but lengthy lunch hours can cut valuable class time. Observe students during their lunch hours and determine the amount of lunch time needed that provides a balance between the "gulpers" and the "dawdlers."
- Disruptions that result from student pull-outs for special classes or counseling are another source of lost time. One way to handle pull-outs more efficiently is for the principal and teachers (rather than the district staff or the visiting teacher) to determine the least disruptive times for pull-outs to occur, and schedule solid blocks of uninterrupted time for teachers. This practice, of course, will require the cooperation of special, traveling teachers such as those in special education and music programs. Such cooperation would involve having the principal check with the central office to be sure the people there know that he or she understands that these traveling teachers can only come on specific days. The principal would request that he or she be allowed to schedule the order and times that the visiting teacher(s) or resource people see specific children so that each teacher could be given a block of interrupted time. For example, the first grade teacher might have 9:00-10:30 uninterrupted, her "special children" would be pulled out before or after this block of time; the second grade teacher would have 9:15-10:45 uninterrupted; etc. The teacher then always knows when his or her time will be uninterrupted and can schedule the most important learning activities during that time. To reduce chance interruptions during these time blocks some schools have hung McREL's "Do Not Disturb, Academic Learning Time in Progress" signs from classroom doorknobs. It is important to let parents know what time their students will be scheduled for uninterrupted time so they will not make medical or dental appointments or classroom visits during this block; most parents welcome this information and will cooperate. It also helps neighborhood medical offices since it automatically staggers appointments out over the day.
- Reduce the time students spend moving from one class to another. This requires school-wide scheduling changes and cooperation. Some schools, for example, have combined 30-minute, three-times-a-week physical education and remedial classes into two 45-minute classes. These and other similar changes cut "travel time" by up to 50 percent and also reduce time-consuming interruptions caused by students going in and out of classrooms.
- Activities such as bathroom breaks also may consume much more time than necessary. One school working with McREL realized an instructional time savings of 20-24 minutes daily simply by scheduling students two at a time to take bathroom breaks at intervals of three minutes, rather than sending the entire class to the bathroom at one time.

Increasing Class Time by Reducing Nonacademic Class Time. Teachers can contribute to increasing their class time by using the following strategies to shrink time lost to nonacademic activities.

- Keep time-consuming behavior problems to a minimum. Available instructional time is increased in classrooms in which the teacher firmly establishes and communicates classroom rules during the first days of school and maintains them throughout the year. (The McREL Quality Schools Program folio *Beginning the School Year* includes strategies for establishing a well-managed classroom, suggestions about school rules, and a checklist of standard operating procedures for the classroom.)
- Enforce classroom rules uniformly; be sure students are aware of the consequences of not following the rules.
- Teach students the importance of on-task behavior.
- Make sure your students know and follow the standard operating procedures for your classroom (for example, how to get your attention if they need help, the procedure for handing in assignments, etc.).
- Have lessons well-planned; always be prepared. Preparation can significantly reduce time lost to student confusion.
- Reduce transition time between activities and lessons. Established routines for sharpening pencils, taking out books and materials, and otherwise "getting ready" can help keep transitions brief.

Increasing Instructional Time. The McREL Quality Schools Program folio, *Instruction,* offers strategies for effective instruction and for increasing engaged time and ALT; however, below are listed some suggestions on increasing the amount of instruction within your instructional time.

- Set a faster lesson pace. The faster the pace, the more content covered, and thus students have more of an opportunity to learn. There are limits, of course, but many teachers underestimate the pace students can follow. A faster pace also keeps students challenged and involved.

- Use "sponges": self-instructional activities designed to use spare minutes between lessons, or before class is dismissed.
- Integrate or combine subjects into multi-purpose lessons. Have students write a science report or read an account of an historical event.
- Decrease the time allotted for breaks and social activities. Contrary to popular belief, students do not need a lot of "break time" to refresh themselves. In fact, long and/or frequent breaks actually lower student involvement in academic work.

Research Reports

The Beginning Teacher Evaluation Study (BTES) sponsored by Far West Laboratory documented that about 60% of the elementary school day was devoted to academic activities, about 23% was devoted to nonacademic activities, and about 17% of the day was spent in noninstructional activities.

The BTES researchers also found:

- The amount of time that teachers allocate to instruction in a particular curriculum area is positively associated with student learning in that content area.
- Allocated time varied enormously between one teacher and another and between one school and another. For example, during one year BTES found one class that spent 350 minutes on reading comprehension; another spent 3000 minutes on the same subject. One teacher spent very little time on silent reading; another spent 3640 minutes. Similar examples can be found in mathematics: one teacher spent nine minutes on money during an entire year – would you want that child making change for you? One teacher spent 29 minutes on linear measurement; another spent 400. It would not be surprising if the students who received 400 minutes of measurement instruction learned more than those who received 29 minutes.
- More substantive interaction between the student and an instructor is associated with higher levels of student engagement.
- Increased instructional time does not decrease student involvement or result in negative attitudes toward learning or school.
- Engagement rates vary widely across classrooms, ranging from as low as 10% in some classrooms to 90% in others.
- Combining engagement rates with time actually allocated shows that students are engaged in learning from 28-50% of the time.
- High success rates increase student engagement. Time on task is highest when students are given tasks that are appropriately difficult – tasks that allow them to succeed 60-90% of the time.
- The proportion of allocated time that students are engaged is positively associated with learning.
- Student engaged time in reading or mathematics is usually greater in formal (structured) settings.
- Engagement does not decrease with increased time allocations. BTES teachers who had the most time allocated to academic content also had the highest engagement rates.
- Engagement is lowest during independent seatwork. Students are more involved in teacher-led settings (84% of the time) than when they are doing seatwork (70% of the time). Yet 70% of class time is spent doing seatwork.
- Student engagement in seatwork materials is especially low in mathematics.
- Increased interaction with the teacher during seatwork tends to increase engagement.
- A learning environment characterized by student responsibility for academic work and by cooperation on academic tasks is associated with higher achievement.
- Increases in academic learning time (ALT) are not associated with more negative attitudes toward mathematics, reading, or school.
- The teacher's accuracy in diagnosing student skill levels is related to student achievement and academic learning time.
- The teacher's prescription of appropriate tasks is related to student achievement and student success rate.
- The proportion of time that reading or mathematics tasks are performed with high success is positively associated with student learning.
- The teacher's value system is related to academic learning time and to student achievement. Teacher emphasis on academic goals is positively associated with student learning.

District researchers in Austin, Texas followed 227 students through an entire school day. Some of their findings about time are listed below.

- More than 20% of the students' time was spent in noninstructional activities. Further, subtracting lunch and recess times, they discovered that only three and three-quarter hours – about 60% of the day – was left for instruction.
- Instructional time could be increased without adding hours to the school day. With improved classroom management, students received from 23 to 34 more minutes of instructional time per day.
- Increased instructional time correlated with higher test scores in math and reading.

A study by Michigan State University's Institute for Research on Teaching found:

- Between 27-42% of the elementary school day is spent in noninstructional activity. Students in classrooms with the most noninstructional activities received the equivalent of five and one-half weeks less instruction than did other classes – during the same number of days.
- Direct instruction for all subjects in the classrooms observed ranged from 84 to 200 minutes per day, with the average being about 100 minutes per day.
- Some students are assigned more seatwork and receive less direct instruction than their classmates.

- In a re-analysis of BTES data, IRT researchers found that students of lower socioeconomic status received less direct instruction.

Other research findings include:

- Teacher time spent working with one or two students while others wait is negatively related to class engagement and achievement; however, time spent working with small or large groups is positively related (Stallings and Kaskowitz).
- Students working in small groups without supervision are less engaged and achieve less (Soar).
- Student choice in activities, in seating arrangement, and free work groups are all associated with less engagement and learning (Soar, Solomon, and Kendall).
- The more time teachers spend in direct instruction, the more time students are actively engaged in academic tasks (Talmage and Rasher).

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Interruptions, Cancellations, Delays, and Depletions: Teachers Need Time to Teach

Helen C. Vo-Dinh, a high school English teacher, voiced her concern in *Newsweek* magazine (August 15, 1983) about the loss of instructional time to nonacademic activities, particularly at the secondary level.

Of the 180 mandated school attendance days in her state, Ms. Vo-Dinh says, "If I consider only the classes I lose to 'necessities' such as fire drills, bomb scares, three days of state-mandated testing, three days of registration and one entire day for school photos, my students have already missed 10 periods out of the 180." There are literally dozens of school-sanctioned activities for which her students miss class, either one by one or en masse, such as club trips, sports activities or practice, pep rallies, science day, cattle judging, club meetings, student government functions, assemblies, appointments with guidance counselors or Army representatives, music or drama rehearsals, art shows, bloodmobile, student council or homecoming elections, PSATs; the list is seemingly endless.

Clearly, extracurricular activities can enrich a student's education, but as Ms. Vo-Dinh points out, there is no pressing reason why they need to take place during school hours, particularly when this sort of scheduling sacrifices valuable instructional time. Some students can read and complete assignments outside of class, copy notes from friends, and keep up with their work; others may settle for lower grades. Much of what takes place in class, however, cannot be made up – for example, class discussions which give students the opportunity to test and clarify ideas on a subject. Administrators need to be aware of the draining effect extracurricular activities can have on academic effectiveness and schedule them accordingly, i.e., before or after school hours. "At the very least," says Ms. Vo-Dinh, "we would then discover which students wanted to participate in activities and which simply wished to escape from class."

Ms. Vo-Dinh concludes by suggesting that teachers be given a fair chance to educate students. "Guarantee me those 180 periods I'm supposed to have. I'll know the public and the people who run the schools are serious about improving them the year my classes have not been shortened, delayed, canceled, interrupted or depleted for any reason short of illness, an emergency or the Second Coming."

Discipline

Over the past ten years, Americans who have responded to opinion polls have named poor discipline as the number one problem plaguing American schools. The public believes good discipline is a "law and order" stance educators should take to reduce or eliminate the physical violence, vandalism, and disrespect shown by students that many believe is pervasive in the schools.

Schools do have discipline problems. However, the discipline problems schools most often handle are actually much less serious than those that concern the public. Such student misconduct as truancy, heckling, failure to complete assignments, and unwillingness to participate may seem minor, but they waste valuable instructional time and interfere with learning.

How can discipline problems be solved? Research shows that the often-advocated crackdowns on misbehavior, "get-tough" attitudes, and harsh punishment do little to solve the problems. A positive learning environment can go much farther towards reducing behavior problems and helping students learn. (See the Research Reports section of this document for descriptions of some of the research about school discipline.) Good discipline is a process to be taught; it is not synonymous with punishment. Effective teachers teach students the value of following reasonable rules and help them understand the purposes for rules. One of education's goals is to teach students self-discipline and responsibility, and like all effective lessons, teachers teach students self-discipline and responsibility through well-planned instruction.

Tips for Teachers and Administrators: Preventing Discipline Problems

In schools with effective discipline, students learn that discipline is the responsibility of everyone in the school. The effective schools research reveals that certain school characteristics, teacher characteristics, and classroom characteristics contribute to effective discipline. These characteristics are described below.

School Characteristics

The faculty and staff of schools with good discipline exhibit the following actions, attitudes, and knowledge:

- they ensure that school rules are stated clearly, positively, and in behavioral terms;
- they enforce the rules uniformly;
- their behavior is a model for students to use in following the rules;
- they get students involved in making the school rules;
- they expect students to succeed at following the school rules;
- they teach the rules to students with the same care and clarity they use to teach their content-area lessons, and they provide opportunities for students to learn, practice, and successfully follow the school rules;
- they understand the factors that might contribute to truancy, excessive absenteeism, tardiness, fighting, cheating, aggressiveness and failure to complete assignments; for example, student fighting may be caused by overcrowded school conditions; aggressive or withdrawn behavior may be the result of previous academic failure that causes students to want to distract attention from their failures or to withdraw from anticipated failure;
- they focus on rewarding rather than punishing behaviors;
- they help students feel better about themselves; and
- they maintain the support and confidence of everyone in the school.

Teacher Characteristics

Effective teachers foster students' self-concepts, and hold high expectations for their students' academic success.

They also use encouragement and kind words more than rebukes and reprimands. They know that sarcasm, ridicule, and verbal abuse are counterproductive in disciplining students because such remarks damage students' self-esteem and reinforce any low opinions students have of themselves. Effective teachers use discipline techniques that focus on improving students' self-images and responsibility by:

- avoiding win-lose conflicts using problem-solving activities rather than resorting to blame or ridicule;
- remaining calm and courteous in the face of hostility or conflict;

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McREL is a public, non-profit organization, funded in part by contracts and grants from the National Institute of Education (NIE). The McREL staff members who contributed to this folio are: C.L. Hutchins, Susan Everson, Robert Ewy, Susan Lynch, Lawrence Mello and Barbara Kessler. Other contributors include: Linda Shalaway.

- earning students' respect by showing that they care about them and their problems;
- being consistent with all students in what they say and do;
- following through on their commitments;
- exercising self-control and avoiding nagging, sarcasm, and bias;
- establishing rapport with students;
- treating students with respect and politeness;
- keeping communication open by being attentive listeners and clarifying students' comments; and
- using "I" messages to discuss problem behavior by stating how it makes the teachers feel.

Teachers with high expectations understand the link between problem behavior and failure in school. Discipline and instruction are closely related. Repeated academic failures cause students to feel frustrated and may cause them to stop trying altogether; such students may act out with anger and hostility. Students need to succeed and teachers need to give them the opportunity to do so. Effective teachers:

- hold high expectations for all students;
- allow students to succeed by assigning schoolwork they can handle;
- direct activities in the classroom by being an authoritative leader;
- model the kind of behavior they expect from students;
- establish the rules for behavior and find solutions to problems with the students;
- specifically describe inappropriate behaviors to students; and
- help students understand the consequences of misbehavior.

Students also need to feel that they are part of a group or a class. By identifying with a particular group or class, students are satisfying their social, academic, and emotional needs for recognition and attention; thus, they are less likely to misbehave. Teachers with good discipline:

- promote a group identity in the classroom by arranging for cooperative experiences, by discouraging competitive cliques, and by being careful not to favor certain students; and
- are aware of cultural differences. Averted eyes may be defiant behavior in one culture, but a sign of respect in another culture.

Classroom Characteristics

The research on effective instruction and classroom climate shows that minimizing classroom behavior problems leads to maximizing student engaged time and achievement. Planning for instruction can diminish discipline problems. Research studies describe differences between teachers who effectively manage problems and those who do not. One of the differences is that effective teachers devote time to planning for the prevention of misbehavior.

A great many discipline problems can be traced to student boredom and confusion. Effective teachers prevent behavior problems by keeping students engaged. Students don't have time to cause trouble if they are busily involved in their schoolwork. A classroom that is physically arranged to facilitate adherence to rules and procedures also helps to prevent discipline problems. (For example, if a classroom rule is "Keep your hands and feet to yourself," infractions of the rule will be reduced by spacing the classroom desks or tables far enough apart so that all students have enough room to stretch their legs out under their desks.)

Certain instructional strategies help teachers keep students on task and involved so discipline problems are minimized. The teacher who has a clear view of the entire classroom and frequently scans the room practices "withitness;" he or she is constantly aware of what is happening in the classroom, and is ready to detect and handle discipline problems. "Overlapping" is another important strategy. It allows a teacher to manage more than one problem at a time. An example of overlapping is that, while he or she is helping individual students work independently, the teacher also monitors the rest of the class to prevent misbehavior.

In a classroom characterized by few discipline problems, teachers:

- prevent problems by teaching and demonstrating classroom rules and procedures at the beginning of the year and allowing time for students to practice them (See the Quality Schools Program folio, *Beginning the School Year,* for more information.);
- maintain lesson momentum by using a brisk but appropriate pace so students stay attentive and interested;
- establish classroom traffic patterns that avoid bottlenecks, obstacles, and long lines;
- avoid long periods of delay and confusion with smooth, brief transitions betwen lessons and activities;
- monitor the classroom continuously and stay aware of what is occurring in all parts of the room;
- teach students academic survival skills, such as how to pay attention, follow directions, and ask for help;
- teach by design, with well planned lessons and advance preparation of materials;
- avoid labeling or judging students as "bad"—instead, they describe the effects of student behavior as "disruptive," "unacceptable," etc.;
- provide appropriate instruction, reteaching, remedial work, and enrichment for all students;
- give positive feedback that specifically describes the student's accomplishment–improved handwriting, for example–rather than simply writing "good" or "A" at the top of an assignment or giving rewards;
- have emergency plans for rainy days, substitutes, assemblies and schedule changes;
- teach students personal and social skills, such as conversing, listening, helping, and sharing; and
- adopt classroom rules that are consistent with the school rules.

Tips for Teachers: Student Responsibility

In effective classrooms students recognize their responsibility for their own problems and take responsibility for solving them. When students act responsibly, good discipline is maintained. Teachers help students act responsibly by setting limits, letting students make choices, and providing a list of reasonable consequences for misbehaviors. Many times students aren't aware they are misbehaving; teachers help students assess their behaviors by asking *what* questions rather than *why* questions. (For example, "What did you do?" rather than, "Why did you do it?" Teachers also help students make important value judgments about their own behaviors through questioning ("Is what you're doing helping you?"). Without becoming abusive, effective teachers work positively with students and guide those who have discipline problems in making a commitment to change their behavior.

Research shows that in developing student responsibility in classrooms, teachers:

- set and enforce the limits of acceptable behaviors and hold students accountable for knowing what behaviors are acceptable;
- confront students when they do not stop their disruptive behavior after the teacher has given a simple warning;
- do not let students exceed the acceptable limits of behaviors;
- inform students that it is their choice to continue misbehaving or to stop misbehaving, and make sure they understand that a decision to continue misbehaving results in a specific consequence;
- make sure that consequences are realistic, reasonable, and appropriate for the misbehavior (cleaning up the mess instead of writing an essay on not making a mess);
- concentrate on the present rather than past mistakes;
- accept no excuses for misbehaviors; and
- have students make a commitment to change behaviors (a handshake, verbal agreement, or signed contract).

When students work independently, they also must take responsibility for their own problems, and for their own learning process. (For information and strategies for helping students become independent learners, see the McREL Quality Schools Program folio, *Instruction*.)

Tips for Teachers: Discipline Techniques

Teachers have many options for handling the discipline problems that arise in their classrooms. Some suggestions are as follows:

Behavior Modification

Behavior modification is the process of reinforcing desirable behavior in order to extinguish undesirable behavior. Whether appropriate or inappropriate, random behavioral responses become patterned because they are reinforced in some way. No matter how sophisticated our learning level, we all respond to reinforcement. Reinforcement may be simply defined as consequence that follows a behavior.

There are two types of reinforcers; extrinsic and intrinsic. Extrinsic reinforcers are consequences that follow a behavior that the student considers rewarding but are external to the student and to the behavior being reinforced. Extrinsic reinforcers range from gold stars and candy to free time and grades. Intrinsic reinforcers are consequences that follow directly from the behavior; for example, when completing a task is its own reward, the task completion has been reinforced intrinsically.

There is much debate about the usefulness and even potential dangers of extrinsic motivation. For example, will the desired behavior automatically cease in the absence of external rewards? Another concern raised is that what constitutes a "reward" varies from student to student. What one student finds rewarding may actually be punishment for another. For example, one student may be embarassed by teacher praise and another student may thrive on praise. Extrinsic rewards can make students aware of the powerful social reinforcement given to those who work hard, behave, learn, and succeed: they help teach students how to win this reinforcement. (For a complete discussion of student motivation, see the McREL Quality Schools Program folio, *Motivation*.)

There are several steps teachers can follow to use extrinsic motivators to change student behavior.

Step 1. Document inappropriate behaviors exhibited by a particular student, or group of students. List the behaviors in order of their importance. The most important is behavior that is most harmful to the student or those around him or her (fighting, running in the hallways, stealing, etc.). Next in importance are behaviors that interfere with the student's ability to learn (constant movement around the classroom, talking out of turn, tardiness, truancy, etc.). Learning problems are third in importance, such as not knowing the multiplication tables, not reading at grade level, not knowing how to spell, etc. Listing the behaviors you want to change is important. (Sometimes students change over time and teachers are not as clear as they need to be about what a student's behavior is at the present time.)

Step 2. Gather baseline data to determine the extent of the problem. Whenever possible, determine the frequency of the behavior. For example, observe the student or students and record the number of times the inappropriate behavior occurs in a given time period: a day, a week, and so on. You might also use other data collection techniques: anecdotal observations, test results, records of critical incidents, etc.

Notice the circumstances when the behavior occurs: perhaps the student wanders around the classroom during math because he or she does not understand the work.

Step 3. List positive consequences to be used when the student(s) behaves appropriately. Be sure to identify several, since no single reinforcer is likely to work indefinitely. For example, teachers can use the following strategies to reinforce desired behaviors:

- Use rewards that are not material objects. Reinforcers such as the opportunity to be first in the lunch line or extra library privileges can be quite effective.
- Token systems (students receive points or tokens that can be later exchanged for rewards) are an advanced form of extrinsic motivation which help students learn to delay gratification.
- Contingency contracting can be adapted to most grade levels and involves contracting with students to carry out certain responsibilities in exchange for certain rewards. There is evidence that contracts help students develop self-control and self-management because they see clearly stated consequences of personal choice.
- Teacher praise, if used for reinforcement, should be 1) spontaneous and sincere, 2) adapted to the specific

accomplishment, 3) expresses publicly or privately according to the student's preference, and 4) specific in describing what the student did.

Also list possible negative reinforcers which are appropriate for the student(s). If inappropriate behavior is well established it may be necessary to suppress it (negative reinforcement) while the "new," desirable behavior is being established through positive reinforcement. When extinguishing undesirable behavior, teachers should consider the following:

- Have students use self-instruction, i.e., telling themselves what to do before doing it. For example, impulsive or aggressive students can learn to assume the "turtle position" (head on desk, eyes closed, fist clenched) or to count silently to themselves when they are upset; this gives them time to relax and consider alternatives. Students can also learn to monitor their own actions with checklists, scoring keys, or charts.
- Ignore or minimize some problems. To acknowledge a minor problem sometimes disrupts the flow of activity and causes more disturbance than did the original problem. A glance, a directed question, or moving closer to the disruptive student may be all that is needed to extinguish inappropriate behavior. A teacher can sometimes properly ignore a problem when the problem is 1) brief, 2) not serious or dangerous, or 3) less important than not disrupting the whole class. However, this approach may backfire if the student interprets it as a signal to increase attention-getting efforts.
- Reprimands, when necessary, should be stated quickly and non-disruptively. Otherwise, there is the possibility of a ripple effect, whereby other students side with the misbehaving student.
- Emphasize problem solving instead of punishment. Students are individuals who are capable of solving their own problems and helping others to do so.

Step 4. Set a specific, short-term goal for improvement. Do not expect to extinguish the undesirable behavior immediately. For example, if the student gets out of his or her seat without permission at least five times a day, set your short-term goal to reduce it to two or three times a day. Once you've achieved that goal you can try to get it down to once or twice a day and then to zero. Setting these "successive approximations" of your long range goal will provide a higher probability of success for the student and a lower level of frustration for you. (Now you can see why counting the frequency of the behaviors is important; if you don't know how many times a student is doing "it," you don't know how to set a realistic goal for improvement. If it has been happening ten times a day and the student gets it down to five times, you won't know there's been an improvement unless you've been counting.) Be ready for backsliding. Even the most well-intentioned person reverts to previous behaviors. Don't treat an occasional slip up as a sign the student has failed and the effort is to be abandoned. Simply accept the slip and keep on working.

Be sure to keep records so you can track success. As the desirable behavior becomes more established, ease up on the reinforcement; reinforce every other occurrence, every third occurrence, and so on.

Work with the student(s) to implement these steps. Sometimes students are not aware they have a problem. Let the student(s) know the target behavior and participate in selecting positive and negative reinforcers. Older students are particularly capable of helping develop plans to change their behavior; they can even assist in keeping records to chart their progress.

Punishment

A cautionary note about using punishment: it can be counterproductive to good discipline. Punishment works best in a large, positive context where good behavior is acknowledged and rewarded. Activities that may appear trivial to the teacher may work well as punishments for students. For example, being last in lunch line, sitting in one place rather than another, or being held up just long enough after school to miss out on walking home with friends. Here are some research-based recommendations concerning punishment:

- avoid physical punishment or strong denunciations;
- administer punishment mildly, briefly, and infrequently;
- never punish in the heat of anger;
- include restitution if possible;
- never use school work as punishment;
- make sure students know why punishment is necessary;
- delay punishment until an appropriate time if necessary; and
- never punish the whole group for one individual's misconduct. If you want more information, there are behavior modification books, materials and workshops available to school faculties, e.g. Assertive Discipline.

Glasser's Discipline Model

Because discipline is a teaching process it involves teaching students the value of reasonable rules. If a student cannot follow reasonable rules it is the teacher's job to teach students how as well as why it is to their benefit to follow the rules. One technique to do this comes from William Glasser's Reality Therapy (1975). The following describes Glasser's ten step process for teachers to use.

Step 1. Think about yourself and the student. Ask, "What am I routinely doing with this student?"

Step 2. Then ask, "Are these things working?" If the answer is "No," make a commitment to stop what you have been doing.

Step 3. Make a plan to do something every day with this student that is personal, friendly, and conveys the message, "I care about you." Be persistent even though a long time passes before your student responds favorably. Stay calm and courteous no matter how your student behaves.

Step 4. When a disruption occurs, issue a simple corrective or directive, such as, "Please stop it" or "Please be here on time"–nothing more. Continue Step 3.

Step 5. If Step 4 doesn't work, ask the student to evaluate his or her behavior: "What are you doing?" and "Is what you are doing against the rules?" If he or she denies doing anything, tell him or her what you see him or her doing and state the rule he or she is breaking. Put the responsibility where it belongs–on the student. Don't say anything more–just wait. (If you have trouble getting the student to admit he or she is breaking the rules, keep a tape recorder running in the classroom. Play it back to the student, or his or her parents, to document the problem. Simply running the tape recorder will help to silence some students.)

If you have been using Steps 1, 2, and 3, the questions in Step 5 are very effective in stopping misbehavior.

Step 6. If the student doesn't stop misbehaving then tell him or her firmly and courteously, "We've got to get together and work it out." Take time to encourage the student to come up with the plan; help if necessary. The plan should be short-term, specific, possible, and involve some form of positive action more than "I'll stop." Get a commitment from the student to follow the plan–shake hands on it, verbalize it, or put it in writing and sign it. It is important in this step to impress upon the student that the problem is going to be worked out. If the plan is not working and the student disrupts again, accept no excuses. Ask him or her, "When are you going to do what you agreed to do in your plan?" Find out what went wrong. If necessary, renegotiate the plan and get a commitment from the student to follow it.

Step 7. If disruption continues, go through Step 6 once or twice. If this doesn't solve the problem, then isolate the student at a time-out location in the room or, if necessary, in the office. (Be careful, the office can be a very interesting place to be sent for some students!) Say to the student, "I want you to sit here until you have a plan that will help you follow the rules or when you are ready to work out a plan with me."

Step 8. Step 8 is in-school suspension. If the student acts up during time-out, then he or she is referred immediately to the principal: "We want you to be in class, but we expect you to follow the rules. As soon as you have a plan that will help you follow the rules, you may return to class. If you need help with your plan, I'll help you." If help with the plan is requested, the principal asks the student, "What did you do?" Then he or she asks, "What plan can you make that will help you do better?" Be prepared for lots of excuses. (Be sure the time-out room is as boring as possible—no pictures, windows, etc.)

Step 9. If a student continues to misbehave, he or she is declared out of control and his or her parents must be notified and asked to take him or her home. However, the principal tells the parents and the student, "Tomorrow is a new day. We would like your child to be with us tomorrow so long as he or she maintains reasonable behavior. If his or her behavior does not remain reasonable we will call you to take him or her home again." When the student returns to school the following day, if he or she misbehaves you go right back to Step 8–in-school suspension –until the student makes a plan to follow the rules.

Step 10. If consistent use of Steps 1 through 9 does not work, then the student must stay home permanently or receive special help provided either by the school district or community agencies.

(For a detailed description of various student behavior problems and step-by-step plans for handling them, see "Handling the Difficult Ones," "*What's Noteworthy on School Improvement*, Summer, 1981. Other resources in Teacher Effectiveness Training by Tom Gordon.)

Research Reports

The Phi Delta Kappa Commission on Discipline investigated discipline by looking at effective schools where discipline was not a significant problem. The Commission found several distinguishing features of schools with effective discipline practices.

- All faculty members and students are involved in problem solving.
- The school is viewed as a place to experience success.
- Problem solving focuses on causes rather than symptoms.
- Emphasis is on positive behaviors and preventive measures.
- The principal is a strong leader.

In an extensive review of classroom research, Jere Brophy and Joyce Putnam of the Institute for Research on Teaching found the following teacher characteristics associated with good class discipline:

- Ego-strength and self-confidence. Teachers with these qualities can listen to student complaints without becoming defensive or authoritarian.
- Positive attitude. If teachers like and respect their students, the students will respond in kind.
- High expectations. Teachers' positive expectations help students perceive themselves as able, valuable, and responsible individuals. They then act that way.
- Authoritative leadership. Authoritative leadership–where the teacher seeks feedback and consensus on decisions and makes sure that decisions and the reasons behind them are well understood–has been shown to be more effective than either authoritarian (where the teacher's decisions are absolute) or laissez-faire (nondirected) leadership.

There is evidence that discipline problems and student alienation are rooted in the very nature of schooling. In citing such school practices as negative labeling of students, tracking, emphasis on competition, and ranking of high school seniors, Eugene Howard of the Colorado Department of Education describes the way that some students get messages early that they are "losers." As a result, those students react with anger and hostility. (For more information, see the article "Improving Discipline Through Unrigging the School," *What's Noteworthy on Discipline*, 1980.)

Some of the anger and hostility can be circumvented by a strong group or class identity. Students who feel they are part of the group are less likely to behave in antisocial ways. Certainly a major feature in the socialization process is identification with a particular group.

Teachers with the best-behaved classes, say Jere Brophy and Joyce Putnam prevent problems by practicing these classroom management strategies:

- lesson materials are always prepared and ready to use;
- lessons are planned to proceed smoothly and at a brisk pace;
- seatwork is appropriately challenging and difficult;
- back-up activities are planned for sudden schedule changes;

- routines, rules, and conduct are stressed early in the year and
- transitions between lessons or activities are brief.

Edmund Emmer and Carolyn Evertson of the Texas Research and Development Center for Teacher Education found that elementary teachers could prevent problems by teaching students how to behave in a classroom. Teachers taught students how to get assistance, contact the teachers, line up, turn in work, and act during seatwork or group activities. Junior high teachers, they found, could prevent problems by setting clear expectations for behavior, academic work, and classroom procedures.

In one study of secondary teachers, researchers found that teachers trained in basic counseling skills could greatly improve students' behavior. The teachers were taught to listen effectively, pay attention to nonverbal cues, and communicate that they understood students' feelings and accepted them as valid.

In a long-term study, Brophy and colleagues at the Institute for Research on Teaching found that problem behaviors can be divided into three categories of ownership:

- Teacher-owned problems are problems which interfere with the teacher's need for authority and control. Aggressive, underachieving, defiant, or immature students become this kind of problem when teachers believe they are acting intentionally to challenge the teacher's authority. As a result, teachers are pessimistic about helping these students change and often resort most to punishment or threatening behaviors when dealing with them.
- Student-owned problems elicit much more sympathy and help from teachers. Examples of students who exhibit these problems are students who are rejected by their peers, are low achievers, or are perfectionists. Teachers do not view these students as acting intentionally, but rather, they see them as victims of their own behavior.
- Teachers are most confident about handling problems owned by both teacher and student. Such problems as hyperactivity, withdrawal, distractibility, and immaturity do not threaten teacher authority, but affect classroom management and control. Teachers believe these students can learn to control their behavior and that their misbehavior is an unintentional act.

Research documents both the pros and cons of behavior modification techniques: On the positive side are reports in an ERIC Research Action Brief on classroom discipline.

- An experiment with high school students showed that teacher praise and grades are not desirable rewards for adolescents. But when the same students were offered early release from school on Friday as a reward for completing classwork, the percentage of time the students misbehaved dropped from 34 to 8 percent.
- Inappropriate behavior among high school sophomores dropped from 75 to 15 percent of the time when the students entered "contracts" awarding them with free-time activities in exchange for appropriate classroom behavior.
- Contracts awarding library visits or quiet visits with friends in exchange for a minimum number of work pages correctly completed stimulated high school seniors to raise their class grade average from a C- to a B.

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Expectations

An accepted axiom in education is that students accomplish what is expected of them. At least, it seems reasonable to believe that students will set their goals no higher than those set by their teachers. This has serious implications when we consider all the different ways teachers signal expectations to students. Some signals come from the ways students are grouped–a youngster placed in the lowest math or reading group knows he or she is considered slow and that not as much will be expected of him or her. How teachers move, who they talk to, how long they wait for responses, and a variety of other classroom mechanisms also telegraph teacher expectations. Expected behavior tends to be reinforced and self-perpetuated; if the teacher expects a student to perform poorly, he or she does, and the expectation is reinforced. The cause-effect relationship between expectations and performance is a complex one and understanding how expectations affect a classroom requires careful thought and introspection on the part of the teacher.

Numerous studies have documented the direct relationship between the teacher's expectations and the student's achievement and performance. (See the Research Reports section of this folio for brief descriptions of some of the studies on expectations.)

Tips for Teachers

The research on expectations suggests that teachers can behave in ways that alleviate problems associated with inappropriate expectations. To cover these suggestions we will address the following areas:

- expectations in the classroom;
- how expectations develop;
- student expectations;
- expectations and achievement; and
- expectations in the multi-ability classroom.

Expectations In The Classroom

Teachers' expectations for students cover many aspects of student behavior, from academic performance to social maturity, creativity, and independent thinking. Expectations are communicated in a variety of ways, but the messages emerge: some students are winners and some are losers. Low achievers soon realize they are less likely to be called on, especially if they look puzzled. These students know they are called on less because the teacher thinks they won't have the answers. They may seek other ways of getting attention, or they may invisibly drift through school. No wonder some students give up on school before they finish even the elementary grades. The unsuccessful student is painfully aware that teachers and other students also know that he or she is unsuccessful. Imagine what the school experience does to that student's self-esteem.

Even when teachers try to be warm and encouraging to low achievers, low expectations may still be communicated. For example, the teacher may praise low achievers for accomplishments that are insignificant. Praise for trivia is often interpreted by students as proof that the teacher thinks they're "dumb," why else would they be praised for a simple task that everyone does routinely?

It's a vicious cycle; a teacher expects little from a student and acts accordingly; the child reacts to the message and fails; and everyone's expectations are reinforced. What's to be done? Solutions are not simple. An important first step is for teachers to recognize the problem. Teachers can improve their expectations for all students in the following ways:

- Assess their view of each student's ability.
- Discover how expectations might affect their actions. Document interactions with students. Does the teacher call on the same few individuals? Are all students given equal attention? Are there students who are overlooked or forgotten?
- Give all students opportunities for success. Researcher Jere Brophy suggests low achievers need to be encouraged with tasks that allow them to experience 80-100% success. Success builds student confidence and self-expectations.
- Use praise carefully and appropriately; praise students for specific accomplishments when deserved. Praise should never be automatic.
- Give attention to all students. Feedback and response time should be the same for all students.
- Give low achievers time to answer questions. If students hesitate, rephrase the question or give a clue.

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McREL is a public, non-profit organization, funded in part by contracts and grants from the National Institute of Education (NIE). The McREL staff members who contributed to this folio are: C.L. Hutchins, Susan Everson, Lyn Moran Hutchins, Susan Lynch, Helen Chapman and Francha Menhard. Other contributors include: Linda Shalaway.

How Expectations Develop

If low teacher expectations contribute to low student achievement, then clearly the solution is for teachers to raise their expectations. Before that can happen, however, it is important to understand how and why expectations develop.

Far too often, teachers' expectations are based on the opinions of others. In school, these opinions come from subjective evaluations by a student's previous teacher, "labels" given students while at school, the comments and concerns of parents, students' standardized test scores, or even the students themselves. Students who have learned to believe that they are failures will easily convince the teacher that they are unable to do well.

A powerful influence on a teacher's expectations is the accepted practice of using a student's reading ability as the overall indicator of academic ability. Which students are considered the brightest? Which students are expected to succeed at new tasks? Teachers assume that the students who are the best readers will be the best at any task.

According to Elizabeth Cohen of Stanford University, classrooms are run in a way which creates and maintains a status order based on students' reading ability. Better readers occupy the top slots in the status order; they are assumed to be more competent at any task, even those not involving reading. Ability grouping reinforces this status order. Teachers and students understand and accept the status order, and expectations and actions are colored accordingly.

The phenomenon whereby having a high skill level in one area generalizes to expectations for high skills in other, possibly unrelated, areas is called "status generalization." Status generalization operates in the classroom, but also in the areas of social power, sex, race, and even athletic prowess. For example, when status generalization is operating, it is more likely that a professional basketball player would be assumed to be more proficient at racquetball than a professional musician because the basketball player had already "proven" him or herself in athletics. The consequences of this example of status generalization are that the musician is much less likely to succeed as a racquetball player than is the basketball player because he or she is not expected to play well; the basketball player, on the other hand, may benefit as a racquetball player from the high expectations that generalize from his or her athletic status in basketball, but it is also possible that he or she may become overconfident, try less hard at racquetball, and fail. Most importantly, status generalization creates drastic differences in the learning opportunities available to high status (good reader) and low status (poor reader) students.

Often, standardized test scores play a major role in the development of the teacher's expectations for a student's academic performance. What teachers need to realize, however, is that these test scores often are not good indicators of a student's academic ability for several reasons.

For example, much of what is tested isn't taught at the grade level where it is tested. Further, much of what is taught isn't tested at all; standardized tests are simply too short to adequately cover a year's worth of content. In addition, the very nature of standardized tests precludes their use as a predictor of performance in specific content areas. The test scores are a comparison of an individual's performance on the test against the performance of other students nationally; to insure that they measure the broad range of achievement present in the nation's students, the tests resort to a number of technical procedures for increasing the difficulty of each item. Problems are arranged in an unusual manner (e.g., math problems in a horizontal format) or irrelevant material is added that may throw some students off the track of the right answer. These complications are inserted to insure that there will be a wide variety of student answers to each item, however, they reduce the tests' usefulness as a predictor of academic skill.

To alleviate the influence of expectations developed from external sources, teachers can:

- Refrain from making judgments about student ability based on previous years' reports, grades, or unsubstantiated information.
- List students and indicate those they expect to do well and those they expect to do poorly. Look for patterns evolving from race, ethnicity, or socioeconomic status.
- Teach all the students in the class. Teachers who help all students succeed communicate expectations that all students can learn.
- Avoid using reading ability as the only predictor of school success.
- Group students by different methods for different activities: by age, height, or alphabetically, as well as by ability. Though ability grouping is appropriate for some learning tasks, avoid using ability groups exclusively. Grouping students in many ways helps break up the expectations set up by ability groups. Another alternative way of grouping students for learning tasks is by using Student Team Learning, a program developed at Johns Hopkins University's Center for Social Organization of Schools. Student Team Learning allows a teacher to instruct students in heterogeneous ability groups while testing them in homogeneous ability groups. (To find out more about Student Team Learning, see the McREL Quality Schools Program folio, *Motivation*.)

Students' Expectations

Like teachers, students have expectations for themselves and those around them. Student expectations tend to mirror the expectations of others. Student expectations for themselves and their classmates represent a powerful classroom force.

In classroom settings students take their cues from teachers. If a teacher expects students to do poorly, the students expect as much from themselves, and so do their classmates (This mirroring effect illustrates how teacher expectations can be so powerful.).

Students form expectations for classmates as early as kindergarten. Researchers noted that students in high-ability groups made derogatory remarks about the drawings of children in low-ability groups. Also in kindergarten, students perceive expectations others hold for them. They use these perceptions in the process of developing a self-image.

To positively influence student expectations, effective teachers:

- Learn what students expect from them and from school in general. Understanding student expectations can help teachers understand the teacher-student relationship.
- Use questionnaires and interviews to discover what students expect.
- Take seriously the power to influence students' expectations of themselves and their classmates. Offhand remarks teachers make about one student to another can be damaging.
- Understand that a student's expectations are formed early in their school careers.

Expectations and Achievement

Low expectations cause teachers to provide fewer learning opportunities to certain students. But what does this mean in terms of specific teacher actions? What are the actual reasons why low expectations lead to lower achievement?

Teachers often avoid calling on students they believe are less able. These students become less able precisely because they are not called on; they are not made to think and do not have the opportunity to exercise their intellectual skills on difficult questions. Even when less able students do answer questions, they frequently get little or no feedback on their responses–right or wrong. Teacher feedback is especially important to low achievers. According to research, 18% of the time teachers fail to respond to low achievers; 3% of the time they fail to respond to high achievers.

Classroom observers have noted that some teachers show little personal regard to students with less academic ability. This behavior includes rudeness, lack of interest in the lives of low ability students, and inattentiveness to their conversation.

Undoubtedly, many teachers discriminate unconsciously and unintentionally. But that does not lessen the negative effects of their behavior on students.

Effective teachers use the following strategies to communicate high expectations to students:

- Make a conscious effort to call on all students.
- Make sure students get the help they need, even those who may not ask for it.
- Allow adequate response time for each student (at least five seconds after asking a question).
- Delve for answers by rephrasing questions, or by giving clues or more information.
- Give low achievers opportunity to practice their thinking skills on higher-level questions.
- Offer positive reactions to student answers–either affirmative or corrective.
- Make praise specific and sincere.
- Look at students when they are speaking, and listen to what they say.
- Be sensitive to students' emotional needs.
- Show respect for students; model the courtesy they expect in return.
- Show an interest in the lives and experiences of all students.

Expectations in the Multi-Ability Classroom

Given the powerful influence of expectations, it would seem that they could be used to advantage in facilitating teaching and learning. And indeed, they can be. High expectations correlate with high achievement.

How can teachers raise their expectations and those of the students?

Perhaps the most promising approach is a strategy known as the multi-ability classroom. Developed by Elizabeth Cohen of Stanford University, this approach rejects the idea that intelligence and competence can be judged solely on the basis of reading ability. Instead, the approach recognizes that many different skills contribute to an individual's overall competence. Students learn that everyone has something to contribute to the group, and as they learn this important lesson, their expectations change–for themselves and for each other.

In the multi-ability classroom, it is important to demonstrate both that low achievers have skills and abilities and that high achievers are not necessarily skilled in all areas. Cohen found that the high expectations always held for high readers often makes them become overly-confident. As such, they tend to dominate their classmates in all activities. Multi-ability classrooms improve student skills, including reading, by encouraging students to help each other; as students' skills improve, their peers' expectations of them rise.

The multi-ability classroom not only increases student expectations and learning, it has other payoffs as well. Its emphasis on cooperation and interaction improves racial relations and attitudes. Attitudes about sex differences change too.

Cohen suggests five steps for implementing the multi-ability classroom. Teachers:

1) Choose an interesting task that involves multiple abilities (for example, drawing, visualizing, managing, organizing, etc.), leadership roles for all students, private evaluations, feedback from peers (in small groups), and a de-emphasis on grading and competition. The task might be an experiment or observation in science, role-playing in language arts, or simulations in social studies.

2) Prepare the task. Make sure that the multiple skills identified are really essential to completing the task.

3) Prepare students for the task. Describe the task and stress that what they will be doing is similar to how adults draw on a number of different skills in the real world. Explain the abilities and skills involved (you may want to chart them in both pictures and words and place the chart where all students can see it) and explain that everyone will be good in at least one of the needed skills. Also let students know that they can ask each other for help in reading or writing.

4) Monitor the task in progress. Make sure all students are participating and helping each other when necessary, and that no one is dominating the interaction.

5) Evaluate the completed task as a group effort. Avoid public evaluations that link performance with reading skill. Have students evaluate themselves on the different abilities.

(For more detailed instructions for implementing the multi-ability classroom, see, "The Effects of Classroom Status on Learning: What Teachers Can Do," *What's Noteworthy on School Improvement and Technology*, Winter, 1982, p. 52.)

Research Reports

Expectations In The Classroom

In a review of research, Jere Brophy of the Institute of Research on Teaching reports that:

- Successful teachers–those whose students perform well –have consistently high expectations for all their students.
- Teachers with high expectations set higher goals, provide greater focus, demand student accountability for work, and offer equal attention and feedback to each individual.
- When teachers have low expectations for certain students, they tend to ignore them during class recitations or discussions. They concentrate more on controlling these students' behavior than on instructing them.

Several major studies have documented teachers shunning students labeled as low achievers. Shunned students receive no eye contact, praise, or opportunity to answer in class, and they have little interaction with the teacher in general.

A year-long experiment in twenty Los Angeles County school districts addressed the problem of shunning by training teachers to pay equal attention to all students. The teachers were taught to call frequently on low achievers, praise them often, and work with them as much as they worked with other students. The result was that teachers' expectations rose, and so did students' reading scores.

Expectations are often communicated through teachers' use of praise. Brophy reports:

- Higher achieving students receive praise for academic performance, while lower achievers receive praise for good conduct.
- White students receive more praise and encouragement than minority students, who receive more negative comments.

Also different is the type of praise offered high and low achievers. According to Mary Budd Rowe, University of Florida, low achievers receive more "nonpertinent praise," than do high achievers and are often praised for trivial things or when they respond incorrectly to a question.

Common, everyday school practices communicate high expectations for some students and low expectations for others, says Eugene Howard of the Colorado Department of Education. For example, practices such as:

- labeling students as "accelerated" or 'remedial",
- ability grouping,
- tracking, and
- class rankings in high school.

How Expectations Develop

- Expectations are frequently associated with cultural, gender, and racial differences, according to Jere Brophy.
- A student's socioeconomic status (SES) also affects teachers' expectations. Byron Brown and Daniel Saks of the Institute for Research on Teaching report that teachers interact less with low SES students and assign them more seatwork than other students.
- Teachers' expectations for themselves as teachers play a large part in determining their expectations for students. Teachers with the highest expectations, says Brophy, are those who believe that instructing students in the curriculum is their primary role. These successful teachers expect all their students to learn, and they act accordingly.
- Ultimately, expectations for student ability and performance are often based on a single factor: reading ability. In extensive work at Stanford University, Elizabeth Cohen has shown that students who have good reading ability are assumed to be competent in any academic area, whereas those with poor reading ability are expected to do poorly on any task. Our entire education system, says Cohen, is influenced by this notion of reading ability as the sole indicator of intelligence.

Student Expectations

- Jere Brophy and other researchers note that students' expectations for themselves are a direct reflection of the expectations others have for them.
- Students' expectations for their classmates are to a large extent dependent on their teachers' expectations for these students. According to Elizabeth Cohen and other researchers, students judged as low in ability by their teachers are perceived that way by their classmates.
- Interestingly, students have some definite expectations for their teachers. Donald Cruickshank of Ohio State University reports that students expect their teachers to be: 1) helpful, 2) fair, 3) patient, 4) firm, 5) encouraging, 6) friendly.

Expectations and Achievement

In reviewing a large body of research on equal opportunity in the classroom, Lyn Moran Hutchins of McREL summarized three areas where teachers treat students differently: response opportunities, feedback, and personal regard.

Response opportunities:

- Teachers call more on high achievers than on those they think are less able.
- Students who may need help but are not aggressive enough to ask are consistently ignored.
- Teachers allow more time for higher achievers to answer questions.
- Fewer clues are provided by teachers when questioning low achievers and they don't delve as deeply for answers from low achievers.
- Low achievers are asked the easiest questions, thus denying them practice in higher-level thinking.

Feedback:

- Teachers are less likely to react to the responses of low-achievers–neither reinforcing appropriate responses nor correcting inappropriate ones.
- Low achievers receive less praise and more criticism, even when their answers are correct.
- Teachers spend less time listening to low achievers.
- Teachers have trouble relating to the feelings and emotions of their students, especially those they see as less able.

Personal regard:

- Teachers fail to model behavior that shows courtesy and respect to low status children, even though they are especially concerned that these same children behave respectfully to them.
- Teachers focus their attention on the experiences of higher status students.
- Fast learners are touched physically by teachers more often than slow ones.
- Low achievers are given the greatest share of commands and dominating contacts.
- Low achievers are separated from the rest of the class by placing them in a group at the rear or side of the room.

Expectations in the Multi-Ability Classroom

Elizabeth Cohen and her colleagues have identified a variety of student skills that contribute to competence in the classroom. Both teacher and student expectations in the classroom may be raised when these skills are considered essential to task completion and academic success, for often poor readers (low status students) demonstrate great facility in these skill areas. These include:

- suggesting new ideas,
- helping a group reach a decision,
- visualizing problems or solutions,
- creativity,
- reasoning (for example, identifying features of objects or concepts, categorizing, identifying relationships, seeing patterns),
- physical skills (strength, dexterity),
- solving problems as they arise (working independently),
- being persistent (tolerance for failure, incongruence), and
- being curious and ingenious.

Cohen found that in a multi-ability classroom, low status students gained status as they demonstrated their skills and competencies in other areas. These same students improved their reading ability by interacting more with other students. Learning increased for all students.

Further, the student interaction encouraged by this approach not only helps students learn to cooperate, it helps them develop conceptual and oral language skills as well.

Suggested Readings

Teacher Application Pamphlet: Designing Change for the Classroom. Elizabeth G. Cohen. Final Report of the Status Equalization Project: Changing Expectations in the Integrated Classroom. Stanford University, 1980. (To be published as a book by Teachers College Press in 1983.)

"Some Are More Equal Than Others." Lyn Moran. *What's Noteworthy on School Improvement*, Summer, 1981. The Mid-continent Regional Educational Laboratory, Kansas City, MO.

Recent Research on Teaching. Jere Brophy. Institute for Research on Teaching, Michigan State University, East Lansing, MI.

"Teacher Behavior and Its Effects." Jere Brophy. *Journal of Educational Psychology*, Vol. 71, No. 6 (1979), p. 735.

STUDENTS CAN MOTIVATE EACH OTHER: STUDENT TEAM LEARNING

Student Team Learning is an unique program that allows teachers to instruct groups of students from all ability levels while testing them in homogeneous ability groups. The program was developed and tested at the Center for the Social Organization of Schools at the Johns Hopkins University.

Student Team learning is highly motivational for students, and:

- it has demonstrated effectiveness in raising student achievement;
- once teachers try it, they and their students like it and use it over and over again;
- it can be used at almost any grade, K-12, with nearly any subject for as long or as little as you want;
- it increases students' responsibility for their own learning;
- once established, it reduces teacher "teaching" time;
- it increases peer-tutoring;
- it solves the problem of organizational grouping patterns that tend to place children of the same ethnic background or the same achievement level together.

What more could you ask for?

In the following paragraphs we will briefly describe how "Teams-Games-Tournaments," one of the components of the program, works.*

Step 1: Take your grade book and divide the class into four groups: one-fourth in a "high group," one-fourth in a "low group," and the remaining students into medium-high and medium-low groups. Ideally, you'd create four groups of four each. Since most classes are larger than that, you can double the number of groups by creating two groups at each ability level.

Step 2: Now assign students from each of these groups into teams. Each team gets one high student, one low student, and one from each of the two middle groups. As you make these assignments, juggle distribution so each team is representative of the race and sex composition of the class. If the number of students isn't divisible by four, the remaining students can be organized into 1 to 3 five-member teams.

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* This description may not solve all the issues that come up when you try the program. We suggest you write to the Johns Hopkins Team Learning Project Center for Social Organization of Schools, The Johns Hopkins University, 3505 N. Charles St., Baltimore, MD 21218, for a copy of the teacher's manual.

Step 3: Prepare your lesson and introduce it to the children. Usually, but not always, teachers divide their instruction into week-long units, introducing a new unit each Monday and holding the tournament on Friday. On the first day, lay out the content to be covered in as clear a fashion as possible; tell them what you expect them to know by Friday. Also tell them what resource materials they need to learn the content–you may schedule a lecture during the week, tell them what pages in their text to cover and/or give them a list of resources they can get from the media center or library.

Step 4: During the period assigned to the subject each day, teams are on their own to cover the material. This is where the peer-tutoring goes on because once they understand the idea (and it probably will take one round before it is completely clear) they all want their team to do as well as possible and, consequently, will help each other. About the middle of the week, give each team some sample items from the test and let them decide how well they're doing. That will function as a self-diagnostic procedure for the students.

Step 5: On Friday, or the last day of the unit, you assign them to "Tournament Tables." Assignments to these tables are made so that only high-ability students are assigned to table 1, medium-high students to table 2, medium-low students to table 3, and low-ability students to table 4. (Double the number of tables if necessary.) Thus, they are competing with students of approximately equal ability and the low students as well as the high students have an equal chance of taking home winning points to their team. The kids soon sense the fairness in this situation.

Step 6: Now they compete to see who can correctly answer the largest number of questions over the content. You develop the questions just as you would any objective test with multiple-choice items, etc. Provide each tournament table with a copy of the test and, separately, an answer-key kept face-down on the table except when they are checking an answer. Each table must also have a deck of cards numbered 1 through the number of items on the test. (You can re-use these decks over and over.) The decks are shuffled. Each student draws one card to decide who starts; the student with the winning hand starts by becoming "the first reader." Before starting, the cards are replaced in the deck and shuffled. Then the "first reader" draws the top card. The number on the card determines the question on the test he or she will try to answer. The "first reader" reads the question and gives his/her best answer. Before checking to see whether the answer is correct, the player to the left of the reader (the "first challenger") has a chance to challenge the answer. If this second player thinks another answer is better, he or she simply says "I challenge, I think the answer is..." The third and subsequent players can challenge in turn. But they can only challenge with an answer that has not been given. Once the challenges are through, the "second challenger" checks the answer sheet and reads the answer out loud. Whoever is right gets to keep the card representing the question number. If any challenger is wrong, s/he must put a card s/he has previously won (if any) back in the deck. Thus, there is little risk to the child who has won nothing. If no one is right, the card is returned to the bottom of the deck.

For the next round the game moves to the left–the first challenger becoming the first reader and the second challenger becoming the first challenger. The game goes on either until all questions have been answered correctly or a pre-set time limit has been reached.

Step 7: Give each table a simple score sheet that they can complete indicating the number of questions they each got right. You can then calculate the scores for each of the original teams. (An easier way is to have them carry the cards they won back to their teams; they can then quickly count the number of cards each won–but if you take this easy way out, the cards will have to be rearranged for later play.)

Usually these tournaments go on for several weeks (after about six weeks new teams should be created to avoid the development of cliques) and the excitement grows just as it would in any competitive sport.

Special problems arise in calculating scores when the numbers on a team are uneven. The manual provides a way of prorating raw scores for teams with two, three, or five members. (See the table.) It also has a procedure for adjusting quiz scores to a standard point scale so that quizzes of different lengths can be used from week to week. The manual has rules for other games and suggestions for making your own materials. Additionally, program materials on a variety of subjects are available from the publisher.

Teachers and students alike are usually very excited about "Student Team Learning." Upper elementary and secondary teachers will especially find it helpful for motivating students they have difficulty reaching.

Motivation Motivation Motivation Motivation Motivation Motivation Motivation Motivation

What is motivation? Motivation is a thorny issue for many teachers, in part because it is an abstract concept that is not easy to define operationally. Motivation is generated by a person's needs, and is the force that guides that person's actions. Because motivation is internally generated, teachers must not underestimate the importance of each student's personal needs; the challenge for teachers is to create an environment where students' needs can be satisifed through learning. Motivation may be intrinsically tied to the art of learning, e.g., the real desire to know something, or it may be tied to other needs, e.g., the need to stay out of trouble or to receive praise. Ideally, the effective teacher finds ways to increase students' motivation to learn.

This is not always a simple process, however, for the motivation to learn is closely tied to phenomena like self-esteem and is profoundly affected by extra-school factors such as physical health, emotional well-being, and parental attitudes toward education.

So what can teachers do to increase student motivation?

First, accept the reality that motivation is an internal phenomenon. This means that nobody can motivate anyone else to do anything. You can provide students with opportunities, incentives, and attractive and stimulating tasks; you can match student interests with learning activities; but you cannot make students learn.

Second, it is important to realize that educational research is debunking some myths about student motivation, such as:

- threats can motivate students to learn;
- students who are not involved in activities are unmotivated; and
- learning automatically improves with increased motivation.

Third, you need to know that the research has identified some interrelated factors that influence student motivation. These factors are: student success, classroom environment, instructional strategies, and rewards.

Student success. One of the most critical tools for improving student motivation is increased success. A teacher who presents a task that is too difficult or poorly explained turns students off – they take the position, "What's the point? I can't do it anyway, why even try."

When teachers help students experience success, students gain self-esteem and are more confident about working toward additional successes. Effective teachers help students succeed by using teaching practices that are designed to increase academic success and by making sure students are aware of and feel responsible for their academic progress.

It is important to understand the ties between motivation, experience of success, and student expectations: children begin their school careers eager and curious, but as schooling progresses many students become sullen, withdrawn, disruptive, or underachieving. Schools' rigid achievement and reward structures make learning an increasingly unrewarding experience for these students; their self-image is threatened by school failure. These students often use "coping" strategies to salvage self-esteem. For example, a student who consistently fails tests may resort to cheating in order to get better grades. A student who is unable to complete assignments may misbehave to bolster his or her self-esteem through peer attention. Another student who is constantly reminded that he or she is an academic failure may stop trying altogether because the expectations being communicated are that he or she can do no better. Thus, the cumulative effectof past failure may stand as its own roadblock to motivation. Even if a teacher presents a task appropriate to a student's skills the student may still avoid the task because of the belief that he or she will fail or because the coping strategies he or she has learned in the past may be more rewarding than completing the task. (Sometimes the principal's office is more interesting than the classroom.) Or, the coping strategy may represent an easier way out. When a teacher is faced with such a student, only repeated, patientefforts are likely to get the student back on track.

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Classroom environment. A positive classroom environment, one that promotes mutual respect, warmth, high standards, and high achievement, enhances student motivation. Through their attitudes and behaviors, effective teachers show that they care about their students while maintaining a businesslike approach toward learning. An attitude of caring and respect must not be underestimated as a tool for increasing motivation; many students will put forth extra effort just because the teacher cares enough to ask them to try.

Instructional strategies. Effective teachers use instructional strategies that stimulate student motivation. Engaged time (amount of time students are actively engaged in their work), classroom management, interactive instruction, immediate and interactive feedback, appropriately paced lessons and activities, and selection of challenging materials are all related to increased student motivation and, in turn, to academic achievement. Activities and lessons that are interesting, appropriate to student skills, and briskly-paced will keep students engaged longer. (See the McREL Quality Schools Program folio, *Instruction*, for more suggestions in this area.)

Rewards. The use of external rewards to influence student motivation is a traditional but controversial practice. Some educators question, for example, whether external rewards might be counterproductive to learning by making it more difficult for students to perform learning tasks without rewards. They believe that simply knowing a correct answer should serve as an internal reward. On the other side there are advocates who point to numerous examples of how rewards have helped students become better-motivated learners; some students are motivated by rewards like praise or "gold stars."

Research suggests that the most effective approach to influencing student motivation is a combination of internal and external rewards. (Lists of suggestions of both internal and external rewards are found in the Motivation Menus section of this folio.)

Tips for Teachers

Student Success

Helping Students Succeed. There are a variety of ways teachers can structure the learning environment to ensure student success at academic tasks.

- Survey students to discover their individual interests, concerns, and needs. Use this information when selecting their assignments. (A sample "Student Motivation Information Form" is included in this folio.)
- Analyze assignments to ascertain the specific skills involved and then make sure that the students possess those skills. Don't overestimate the academic skills of your lowest achieving students. They may have developed techniques for concealing their weaknesses, and may be three or four grade levels behind their peers – that fourteen year-old may not even know the multiplication tables!
- Preview assignments with students – tell them and show them exactly what is expected of them and what the end product should look like. For example, give students copies of past themes or projects you liked that are within their range of skills.
- Set forth clear and measurable objectives, demonstrate how learning activities relate to the objectives, and evaluate students' performance according to the objectives.
- Allow students to fail without criticism. Expect them to make many trials; leave these trials undocumented.
- Record all student successes.
- Match learning tasks with student skills and interests.
- Assign some tasks at which students are sure to succeed.

A student's self-concept is affected by teacher behavior, expectations, and communication patterns. Teachers who help students build positive self-images often use the following strategies.

- Actively listen to the students. In active listening, the message receiver tries to understand what feelings lie behind the speaker's words. The receiver then puts his or her understanding of the message into his or her own words and feeds it back to the speaker for verification. The receiver is careful not to add a message of his or her own – advice, opinion, evaluation, judgement, question, analysis, or solution – but only what he or she thinks the speaker's message means.
- Hold high expectations for all students. Over and over the research demonstrates that students tend to live up to what is expected of them. We communicate our expectations by words and actions. Words and actions must be consistent for the message to ring true. It is especially important to know that teachers have ways they unconsciously signal to students that they do not expect them to succeed. (See the McREL Quality Schools Program folio, *Expectations*, for more information on these signaling mechanisms.) Also realize that ability grouping automatically tells some students (the ones in the "low" group) you expect less of them. Research suggests avoiding ability grouping whenever you can.
- Set high standards for yourself. Because students tend to imitate behaviors they see, teachers must practice what they preach. If teachers set deadlines for students, they should meet their own. If teachers want respect, they should treat others with respect.
- Model a positive self-concept. Teachers who respect and care for themselves find it easier to extend care, respect, and acceptance to students, which encourages students to be self-accepting.

Classroom Environment

Effective teachers create an atmosphere of trust and mutual respect in their classrooms, as well as a work-oriented climate. This combination of classroom conditions is motivating for students.

- Teacher attitudes and behaviors mean a lot. Positive attitudes, infectious enthusiasm, words of encouragement, and high expectations are all motivating. Teachers who are warm, patient, tolerant, and interested in students are able to influence students' class performance as well as influencing them in other positive ways.

- Encourage students to share experiences and learn about each other. Ask students to discuss something they like to do and do well; or to teach the rest of the class about a hobby, skill, sport, musical instrument, or other special interest they have.
- Create a "proud-of" bulletin board for posting individual and group work, pictures, and drawings. Polaroid pictures of students next to their poems, stories, or perfect homework can be quite reinforcing and motivating.
- Make sure your classroom is well-organized: students know where to find materials, how they are expected to behave, the procedures for beginning and ending class, etc. A classroom that is orderly and managed well provides a safe environment that motivates learners. (See the McREL Quality Schools Program folio, *Beginning the School Year,* for tips on setting up and teaching the rules, routines, and standard operating procedures that are the basis of a well-organized classroom.)

Instructional Strategies

The instructional strategies teachers use to increase student motivation are grouped in four categories: feedback, competition, student control of the learning process, and student responsibility for learning.

Feedback

- Use immediate, task-specific feedback to help students learn from their mistakes. When nonevaluative feedback promptly follows an error, the error becomes a means of instruction rather than a signal of failure.
- Give positive as well as corrective feedback, especially during class time, to encourage students to continue to volunteer answers and to participate in class discussion. Low achievers or students with a history of failure in particular will benefit from this supportive type of interaction.
- Make students aware of their progress. There are many ways of accomplishing this, from wall charts with stars representing achievements, to allowing students to periodically check their progress by looking up their records on the school's computer system.
- Try assigning tasks with built-in feedback. Feedback that is built into the task itself is highly motivating; this is the type of feedback video game enthusiasts receive. Not only is their score registered on the screen second by second, but players can see immediately whether or not their strategies are working. Teachers can build feedback into tasks via continuous monitoring of student progress; for example having the entire class work the same math problem at the blackboard. Computer assisted instruction is another activity that can provide built-in feedback if it is well designed.

Competition

- Friendly, well-organized competition, where each student has a chance to succeed, can be highly motivating.
- Ask students to compete against themselves. Each student can work to beat his or her previous score on a particular activity or task. This is a fairly unthreatening way to use competition to enhance motivation. The teacher or student keeps a record of grades, correct responses, speed, and so on to document improvement.
- Teams-Games-Tournaments is a fun, competitive, learning activity that involves having students learn in heterogeneous ability groups (teams) and compete in homogeneous ability groups, bringing their "points" home to their team. See the box titled "Student Team Learning" in this folio for information about this activity.

Student Control of the Learning Process

- A feeling of control gives students more investment in learning. Very young students can take some control by choosing which activity they will do first.
- For many older students the sense of involvement and control over what they will do is crucial. Teachers can negotiate with these older students about learning tasks; often several activities will meet the same objective or the student may have other ideas that can be used to meet the objective. Allowing students to plan their own learning tasks or to choose from several options gives them a sense of control.
- Student-teacher contracts, wherein the student agrees to complete specific assignments and the teacher agrees to award a specific grade contingent upon completion of those assignments, are motivating for some students.

Student Responsibility for Learning

- Students need to realize that they are responsible for their own motivation to learn. Hold class discussions about motivation to help students discover what motivates them. (You might also use the "Student Motivation Information Form" included in this folio.)
- Once students identify what motivates them, help them practice strategies to heighten their own motivation.

Rewards

Effective teachers learn to match rewards with the needs and preferences of individual students. These teachers also tie rewards to specific educational objectives and make sure the rewards are appropriate. Teachers can:

- Learn what is reinforcing. Through careful observation, teachers can learn what is most reinforcing for individual students; they match rewards with student needs and preferences.
- Try "different" reinforcers. Instead of using stickers or tokens or other tangibles, try such things as the opportunity to be first to go to lunch, to have extra library privileges, or to perform special tasks for the teacher. These incentives can be tied closely to the goals of education. (The Motivation Menus in this folio list reinforcers that have been used successfully by educators working with McREL.)
- Use praise carefully. Remember that praise is only reinforcing to some students; also, praise may hook students on external rewards and weaken their self-motivation. Use of praise should be sincere, specific to the student's accomplishment (general praise does not tell them what they did well), and adapted to the student's preferences. Secondary teachers need to be judicious in their use of public praise; many older students are embarassed by being praised in front of their peers but will respond positively to a note on their paper or a private word as they leave class. (For more information about the use of praise, see "Your Praise Can Smother Learning," *Noteworthy,* Winter, 1982.)

- Try some school-wide motivational strategies. Ask the principal and other teachers to help create a more motivational school environment. For example, reward students and teachers with special verbal recognition: have an administrator call nominated individuals to the office for a verbal "pat on the back" – or send home a positive note.

Research Reports

Student Success

In an extensive survey of the research literature, Donald Cruickshank of Ohio State University found that teachers can help students succeed by:

- Teaching clearly–offering precise statements of purpose, explaining concepts with examples, helping students organize their work, and clearly stating expectations.
- Being enthusiastic.
- Using a variety of teaching styles and materials, and adjusting content to the learner.
- Providing students with the best opportunity to learn the material covered–through carefully organizing lessons.
- teaching students how to study, etc.
- Acting businesslike and work-oriented–supervising or directing most student activities, always in a warm and congenial manner.
- Recognizing that pupil motivation is related to personal needs.
- Helping students get the most out of school–by attending to personal as well as academic growth and development.

Classroom Environment

Studies by researchers such as Jere Brophy, Donald Cruickshank, and Walter Doyle consistently describe features in positive classroom environments:

- Students dare to take risks.
- Students share their talents and encourage each other to learn more skills.
- There is an overriding sense of respect for self and others.
- Members of the class care for and trust each other.
- Students know they are important.

Instructional Strategies

Studies by Jere Brophy, Thomas Good, Carolyn Evertson, Jane Stallings, Walter Doyle, and many other classroom researchers point to several consistently effective strategies for keeping kids involved in their school work. Among them are:

- Briskly-paced lessons that account for students' ability levels while keeping students alert and challenged.
- Teacher-directed instruction, or "active teaching" rather than students working alone.
- Variety and challenge in independent student assignments.
- Good questioning skills.
- Immediate feedback on student work.
- Team-learning approaches.

Rewards

There is evidence to document the pros and cons of external rewards. One private school has developed a whole system of external rewards where students receive points for writing and time on task; (see "Denver's Computerized School," *Noteworthy,* Winter, 1982 for more information) they can later trade those points for free time, money, outings, and video game tokens.

In a Research Action Brief, the ERIC Clearinghouse on Educational Management reports impressive short-term effects of external rewards; long-term effects are not known. The Brief also reports that grades are not effective rewards for many students.

Donald Cruickshank of Ohio State University reports that irregular reinforcement (e.g., a reward after three successful performances, then after five, then after two, etc.) is more effective than reinforcement at regular intervals. Cruickshank also reports that:

- Novelty works well in reinforcement.
- Reinforcement that relates to actual needs is most powerful. For example, for a lonely child, the teacher's recognition is more effective than candy or tokens.
- Rewards must depend on actual performance, not on what's promised.
- Reinforcement should match the size of the task. The smallest possible reward is the most effective.
- Reinforcement is usually positive. Punishment typically reinforces only negative behavior.

Teacher praise is a special form of external reward. Jere Brophy and Joyce Putnam of the Institute for Research on Teaching caution that praise, even if intended as a reward, may seem more like punishment to a child who is embarrassed or threatened by special attention. Their research shows that praise is effective only if it is:

- Sincere (spontaneous),
- Adapted in a form and intensity to specific accomplishments (no gushing over trivia),
- Expressed publicly or privately according to the preferences of the individual, and
- Specific in describing exactly what the student did.

Brophy and Putnam conclude that teacher praise, like other external rewards, nets mixed results. Extrinsic reinforcers, they believe, are effective only if the learning task is not meaningful.

Student Team Learning is particularly well thought-of as an innovative instructional program. See the Summer, 1981, green *Noteworthy* for the full article entitled *Kids Who Team Teach*, pages 14-15. For further material, we suggest writing to the Johns Hopkins Team Learning Project Center for Social Organization of Schools, The Johns Hopkins University, 3505 N. Charles Street, Baltimore, Md 21218, for a copy of the teacher's manual.

Readings

"A 'Pac-Man' Theory of Motivation: Tactical Implications for Classroom Instruction." Richard F. Bowman, Jr. *Educational Technology*, September, 1982, pp. 14-16.

"Agency and Achievement: Self-Management and Self-Regard." John W. Thomas, *Review of Educational Research*, Summer, 1980, Vol. 5, No. 2, pp. 213-240.

"Allocated Academic Learning Time Revisited, or Beyond Time on Task." Jane Stallings. *Educational Researcher*, December, 1980, pp. 11-16.

Classroom Discipline. Research Action Brief prepared by ERIC Clearinghouse on Educational Management, No. 5, August, 1979.

Teaching is Tough. Donald R. Cruickshank and Associates. Prentice-Hall, Inc. Englewood Cliffs, NJ., 1980.

"Who's in Charge Here?" *What's Noteworthy on Discipline*, Mid-continent Regional Educational Laboratory, Kansas City, MO.

Resource Materials

"Student Team Learning." Center for Social Organization of Schools, The Johns Hopkins University, 3505 N. Charles St., Baltimore, MD 21218.

"Successful Motivation Strategies - Participant's Manual." Teacher's Institute of Continuing Education, 4621 N. 16th St., Suite F-608, Phoenix, AZ 85106.

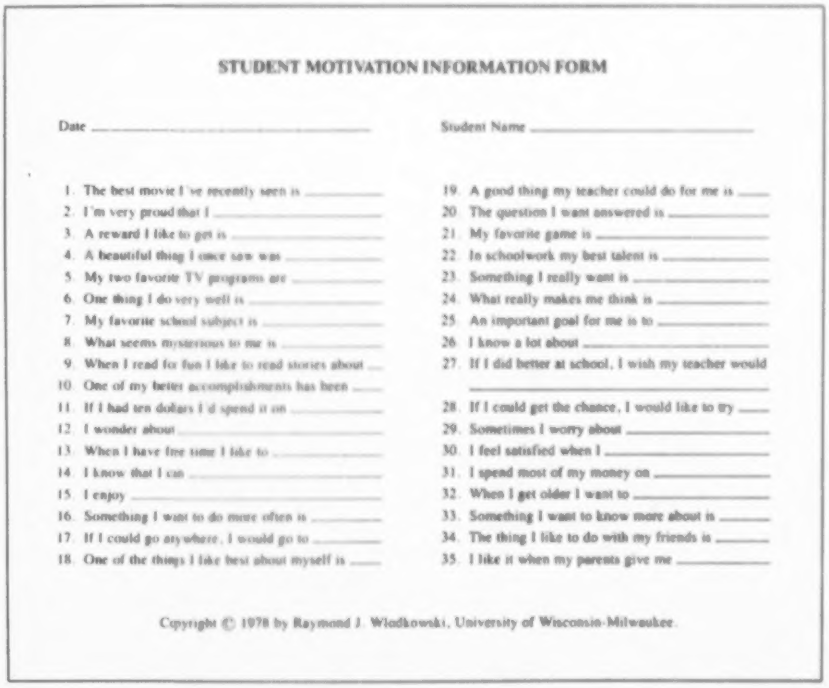
What's Noteworthy on School Improvement, Summer, 1981. Mid-continent Regional Educational Laboratory, Kansas City, MO.

What's Noteworthy on School Improvement and Technology, Winter, 1982. Mid-continent Regional Educational Laboratory, Kansas City, MO.

FINDING OUT WHAT MOTIVATES YOUR STUDENTS

Knowing what students are interested in, what satisfies them, what rewards they value, and what they are curious about, can help teachers plan learning tasks which relate to student needs. In some cases the learning task may be directly related to a student's desire for a specific skill or information.

Raymond J. Wlodkowski of the University of Wisconsin, Milwaukee, has developed a way teachers can elicit from each individual student concrete information which can be used to boost his or her motivation to learn. His Student Motivation Information Form focuses on four basic areas of student preferences and characteristics: 1) interests, concerns, and desires; 2) satisfactions, accomplishments, and strengths; 3) valued rewards; and 4) items of curiosity, wonder, and exploration.



STUDENT MOTIVATION INFORMATION FORM

Date ____________________

Student Name ____________________

1. The best movie I've recently seen is ____________
2. I'm very proud that I ____________
3. A reward I like to get is ____________
4. A beautiful thing I once saw was ____________
5. My two favorite TV programs are ____________
6. One thing I do very well is ____________
7. My favorite school subject is ____________
8. What seems mysterious to me is ____________
9. When I read for fun I like to read stories about ____
10. One of my better accomplishments has been ______
11. If I had ten dollars I'd spend it on ____________
12. I wonder about ____________
13. When I have free time I like to ____________
14. I know that I can ____________
15. I enjoy ____________
16. Something I want to do more often is ____________
17. If I could go anywhere, I would go to ____________
18. One of the things I like best about myself is ______
19. A good thing my teacher could do for me is ______
20. The question I want answered is ____________
21. My favorite game is ____________
22. In schoolwork my best talent is ____________
23. Something I really want is ____________
24. What really makes me think is ____________
25. An important goal for me is to ____________
26. I know a lot about ____________
27. If I did better at school, I wish my teacher would ____________
28. If I could get the chance, I would like to try ______
29. Sometimes I worry about ____________
30. I feel satisfied when I ____________
31. I spend most of my money on ____________
32. When I get older I want to ____________
33. Something I want to know more about is ______
34. The thing I like to do with my friends is ______
35. I like it when my parents give me ____________

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MOTIVATION MENU

Here's food for thought: McREL held "school improvement workshops" in several of the states it serves. One of the nicest outcomes was this "menu" of motivational ideas teachers have successfully used with their students, classes, and schools.
Bon Appetit!

Column A
Recognition/Reward/Strokes

- Teaching Others
- Oral Comments
- Smiley Faces
- Attention
- Grades
- Teacher Excitement
- Tokens
- Knowledge of Results
- Child Input
- Tone of Voice Acceptance (Peers, Teachers, etc.)
- Money
- Trips
- Happy-Grams
- Stickers
- Peer-Tutoring
- Pat on the Back
- Special Jobs
- Quiet Class-Lunch With Teacher
- Trips to Media Center
- Lunch Invitations
- Complimentary Comments
- Happy Notes to Parents
- Posting Names of Improved Students on Bulletin Board
- Notes on Report Cards
- Secret Friends
- Daily Helpers
- Immediate Reinforcement
- Tangible Rewards
- Specific Praise
- Individual Evaluation
- One-to-One Counseling
- Daily Newspaper as a Prize
- Citizenship Assembly
- Smiles
- Laughter
- Friendly Greeting
- Please/Thank-You
- Skating Parties
- Free Gym Period for Winning Class
- Treats for Contest Winners
- Warm Fuzzies
- Stars
- Warmth
- Caring
- Special Table in Lunchroom
- Special Birthday Cards Signed by Staff
- School Stationery
- Send to Office for Good Behavior
- "Birthdays" Party Honoring Birthdays and Inviting Parents
- Good Citizenship Pictures Posted in Hall
- Field Trip to Concert/Play
- Pictures Displayed with Biographies
- Art Work Displayed in Local Businesses
- Friday Afternoon Club
- Field Day "Olympics," Silly Olympics, Special Events, Non-Competitive Games, Gymnastics Night
- Student Advisement Groups
- All Papers Sent Home Once a Week
- Student Council Bulletin Board with Student Pictures
- MIC (Much Improved Child) Award
- Good Behavior Coupons–Raffle
- Speakers
- Lunch Out
- Board Work
- Certificates
- Phone Call Home
- Academic & Service Award Assemblies
- Lunch with Teacher
- Earn Free Time
- Trip to Amusement Park
- Display of Class Work
- Taking Work to Show Principal
- Class Picnic
- Pennies on Desk for Attendance
- Classroom "Money" for Points
- Free After-school Movies
- Good Attendance–20 min. Free Time
- Picnic for Class with Best Passing in Hall for a Month
- Ice Cream Social for Good Behavior
- Cookies for Week of Good Behavior
- Slide-Show of School Activities
- Talent Show (Parents, Teachers, Students)
- Appreciation Day
- Art Show
- Hobby Display
- Surprise Movie
- Ribbons for Cleanest Rooms
- Family Night Grade Level Dinner and Program
- "Captain's Table"
- Anonymous Nomination of Anyone I Saw Doing Something Good–Peer Prize
- Hugs
- First in Line
- Responsibility Award for Time on Task
- Chance to Visit Another Room
- Teachers Attend Student Activities
- Teachers Sit Among Students
- Names in School or Community Newspaper
- Monthly "Perfect Attendance" Movies
- Much Improved Student Award
- Award Assemblies
- Graduation Pictures Posted in Halls
- "I Got Caught Being Good" T-shirt Awards

Column B
Special Projects

- Sing for Elderly
- Clean-up
- Making Books
- Participation in Political Events
- Song Fests
- School Newspaper
- Special Lunch or Dinner with Decorations
- Potlucks
- Theme of the Month
- Slogan for the Year
- School T-shirts
- "Helping Projects"
- Canned Food Drive
- School Store
- Birthday Charts
- Make a Movie
- Music Program
- School Carnival
- School-wide breakfast
- "Cook-outs" with Parents/Teachers

T-shirt Sales
School Mascot on All Trash Containers
Class Officers in Each Room
Attendance Charts
Student or Teacher Profiles
Student Doing the Teaching
Mentors from the Community
Adopt-a-Grandparent
Career Fairs

Column C
Days & Special Events

Senior Citizens Day
Friendship Day
Crazy Hat Day or Special Hat Day
T-shirt Day
Backward Day
Dress-up Day and Hobo Day
Family Fun Night
School Colors Day
Cut-Off-Principal's-Tie (or Scarf) Day
Flag Day (Classes Make State Flags, etc.)
Ethnic Pride Day
Quiet Day with "Mum" Ball
Art/Music Talent Days
Picnic for Class with Best Passing in Jeans Day
Cowboy Day
Everybody-Wear-Red Day
Everyone-Compliment-Someone Day (e.g., Give 3 Compliments, Learn to Accept Compliments, etc.)
Everyone-Do-Something-Nice Day
Helicopter on Playground
Wear School T-shirt on Fridays
Wear-a-Flower Day
Halloween (Teachers in Costume, too) & Costume Parade
Appreciation Day
Safety Program
Bus Driver & Aide Appreciation Day
Dress-alike Day
50's Day
Clash Day or Mismatch Day
Storybook Character Day
Circus Day
Security Blanket Day
Special Guest Day
Parent Day (Lunch)
Staff Recognition Day
Run Races or All-Star Ballgames with Teachers or Principal
Foreign Food Festival
Elizabethan Festival
Decorating Lockers at Christmas
Field Trips
Secret Stocking Pals at Christmas

Column D
Special Expression/Understanding

Role-Playing
Planting a Garden
Farming
Animals/Fish
Plays
Speakers
Make a Movie
Field Trips
Wall Charts
Bulletin Board Model
"Hands-On" Workshops
Art
Music or Music Program
Tape Record Readings
Videotaping
Buddy System for New Students
Daily Helpers
Poetry
Touch
Secret Pal
"You Look Nice"
Opportunities for Decision-making
"Open Lunch" for Upperclass Persons
"Open Campus" for Upperclass Persons
Senior Class Lounge
Working with Partners
Centers of Interests (e.g., Painting)
Writing Letters
Work in Community (e.g., Sing for Elderly, Record Oral Histories)
Storytelling
Personal Experiences
Cross-age Tutoring
Making Books
Soothing Music in the Halls
Music in the Lunchroom Once a Week
Appreciation Day

Column E
Contests/Competition/Goals

Drawing
Math Contests
Spelling Bee
Games
Earn Free Time
Tournament
Faculty Sports Contest
Interschool Competition
Points
Spelling Week
Bingo
Film to Get Students in After Lunch or for Best Behaved Class
Popcorn Party for Best Class
Design School Flag, Insignia, Newsletter, Mascot
Cookies/Picnic for Well-behaved Class
PTA Membership Competition
Canned Food Drive
Weekly Ground Clean-up
Good Behavior Coupon/Raffle
Weekly Behavior Rewards
Children Run Races with Staff
Talent Show (e.g., Parents and Teachers or Students)
T-shirt Sales
Functioning Class Officers in Each Room
Jeopardy
Spelling Monopoly
Student of the Month
Boys Against Girls
Individual Competition
Time-test Winner for Breaking Own Record
Challenge
Candy Bar Question
Intramurals
"Whiz-a-matic Machine" Quiz Show–teams of students develop test items from their own current events reading

Column F
Everybody Can Participate

Song Fests
Art Fests
Field Days
Non-Competitive Games, Skiing, Skating
Grade-level Lunches by Principal
"Birthdays" Party Honoring Birthdays and Invite Parents
Board Work
School-wide Breakfast
Free After-school Movies
Popcorn Party
Review Teams for Tests
Mini-courses
Book club
Birthday Club
Read-a-thon

Column G
Show Off Work

Publishing
Harder Tests
Bulletin Board Display
Taking Home Book to Share
Showcase Projects
Bulletin Board Model
Wall Charts
Talk With Principal
Display of Class Work
Academic & Service Award Assemblies

Certificates
Make a Movie
Slide-show of School Activities
Art Show
"Talent Show" of Children's Projects
Show to Others
Show to Principal
Reading to Younger Students

Column H
Suspend the Rules

Free Time
Special Privileges
Write on Hands–to Show Last Year's Teacher
Mascot Travels from Room to Room
Sit-Where-You-Want in Lunchroom Day
Outside Play Time
Lunch Out
Phone Call Home
Earn Free Time
Trip to Amusement Park
Take Work to Principal
Special Excursion
Skating Parties
Shirt-tail Day
Hat Day
Gum in Class
Crib Notes for Tests

Column I
Teachers

"Every 'Teach' is a Peach" Award
Wine & Cheese Party–Faculty
Raft Trip–Faculty
Teacher Cook-out
Teacher Classroom Exchange Day
Celebrate Teachers' Birthdays
Teachers Dress Up on Halloween
Staff Recognition Day
Faculty Breakfasts
Hobby Display
Teacher of the Month
Teacher Appreciation Day
Administrative Support for Teachers Enforcing Rules

Column J
Parents

Parent Volunteer Program
Parent Luncheon
Phone Call Home
Happy Note to Parents
Parent-Teacher Cook Out
"Birthdays" Party
Grade-Level Family Night Dinner and Program
Parent/Teacher/Student Conferences
Ask Mom/Dad for Information
Parent-child Obstacle Course

Column K
"Extra" and Fun

A Surprise
Films
Holidays
Newness
Outside Trips
Free Time
School Assemblies
Concert
Reading Corners
Change Classrooms (e.g., on April 1)
School Sing-A-Long
Outside Play Time
Plays
Field Trips
Special Guest Day
Parent Day Luncheon
Staff Recognition Day
Lunch with Teacher
Trip to Amusement Park
Class Picnic
Special Excursions
Skating Parties
Spring Carnival
Computer Time for Time on Task
Lunchtime Dances

Column L
Room Arrangements

Guilt Corner
Pads
Warm Lighting
Pleasant Room
Individual Desks
Decor
Learning Centers
Subject Area Labs

Instruction

Instruction is at the heart of teaching. All else supports the critical interaction that characterizes the relationship between teacher and student. What is it that characterizes effective instruction? At the heart is a series of phases or steps. Researchers have described these phases using "models." (For descriptions of several instructional models, see "Teachers Do Make a Difference," *What's Noteworthy on School Improvement and Technology*, pp. 47-51).

There is a commonality to all these models--certain steps that must be included no matter what you do. These steps are detailed below.

Phase 1: Planning

Instruction begins long before the teacher steps up in front of the class to teach a lesson. Planning comes first. Teachers have time to become reflective and weigh alternatives in making decisions. This is a time to choose a general topic for teaching, choose a major objective within the general topic, and then match a more specific instructional objective for specific students.

Planning is often called the key to professionalism in teaching. In planning, teachers use their professional expertise to match ideas, activities, and materials with student interests and abilities. The result is an effective lesson that is tailor-made for its audience.

The research indicates a direct link between careful planning and academically successful students. A plan of action gives confidence and security. It reduces confusion, wasted time, and other factors associated with decreased learning.

Further, time management studies show that the more time spent in planning, the less time required for completing a project. Thus, planning can help teachers use precious classrooom time more efficiently.

Planning Tips for Teachers

There are four essential steps in planning for instruction:

1) Assess the student's current level of skills and knowledge. In other words, find out what each student now knows. Some form of a "pretest" can be useful for this purpose. Also assess each student's strengths and weaknesses.

2) Use assessment information to decide what skills or knowledge the students should learn next, and how the material should be presented. Every effort should be made to sequence the skills in some sort of hierarchy—if a student needs to know how to do "x" before "y" can be accomplished, then "x" must be next. In other words, what comes next?

3) Use planning as another stage at which materials can be organized to increase the probability of mastery. For example, identifying "chunks", parts or conceptual segments that can be learned separately, before they are integrated or reorganized into larger chunks.

4) Decide what standards will be used to indicate successful learning. What rate of success will be required to demonstrate mastery?

Effective teachers also:

- plan for interruptions and unexpected events. A game plan for emergencies helps teachers maintain order and minimize disruptions;
- use daily and weekly plans that fit neatly into larger unit and yearly plans;
- set aside a regular time for planning.

Phase 2: Teaching the Lesson

Experimental studies cited by Barak Rosenshine and others clearly demonstrate that certain teaching functions and strategies lead to increased student achievement. Researchers working with different teachers in other settings reached the same conclusions about effective and less effective instruction.

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McREL is a public, non-profit organization, funded in part by contracts and grants from the National Institute of Education (NIE). The McREL staff members who contributed to this folio are: C.L. Hutchins, Susan Everson, Susan Lynch, Robert Ewy, Robert Marzano, Helen Chapman and Barbara Kessler. Other contributors include: Linda Shalaway.

One of the most important findings to emerge is that students need to master content to the point of "overlearning." "Overlearning" ensures that students become confident with the material and less hesitant when applying it to new situations. "Overlearning" also helps students retain the material learned. "Overlearning" should be a goal for each step of the teaching process.

The research also stresses the need to sustain a high success rate in student responses as the student reaches the point of mastery. Teachers accomplish this by presenting material in small steps, directing practice by asking questions, allowing sufficient time for practice, "overlearning," and frequent review. Researchers recommend a success rate of above 60 percent for new material and 95 percent during practice (See the McREL Quality Schools Program Folio, *Time Management*, for more information on success rates).

Effective teachers also give immediate, specific, academic feedback to students. Immediate feedback reinforces correct answers and signals errors, giving students a chance to correct errors before they become embedded.

Tips for Teachers on Instruction:

There are four basic stages appropriate to teaching the lesson:

a) *Task Focus*. Get the students *set* to work; do it the most interesting way possible. Then tell the student(s) the purpose of the lesson; make sure the students know what the desired outcome is. Examples of acceptable and unacceptable finished work are exhibited. In other words, do the students know what they're supposed to learn. (Some teachers develop hand signals, such as thumbs up, their students can use to signal the teacher that they understand what they are supposed to be doing; this technique along with other "every pupil response techniques" can be used at several points in the teaching cycle.)

b) *Lesson Presentation*. The teacher presents the new concept or skills to the students. During the lesson the teacher and students *interact* constantly. The material is treated in various ways. Skills are modeled, information is provided in several *different modes or styles* (e.g., orally and in writing), strategies for accomplishing the task (such as strategies for memorizing) are explained, methods for checking accuracy are also presented. Be sure that all the skills needed to accomplish the task are present (see the McREL Quality Schools Program folio, *Expectations*, for more information on teaching to "multiple abilities").

c) Students then engage in *guided practice*; during this process teachers monitor and give continual, content specific feedback to students. (Remember when math instructors got everyone up at the board at the same time so they could simultaneously monitor everyone's work?) Success is checked or monitored. If they are not successful, alternative methods are tried. Enough time is provided for each child to be successful.

d) *Independent Practice*. Once the teacher believes that the student(s) understands what has been taught, time is allowed for the student to work alone. High rates of success should be characteristic of this phase of instruction. This practice is both "massed" and "spaced." In other words, the student experiences an intensive period of practice immediately following instruction. Additional practice and reviews occur at regular intervals: the next day before the next class session begins (this has been found particularly helpful in mathematics), once a week, and at appropriate intervals thereafter.

The research suggests the following additional strategies teachers can use in teaching the lesson:

- proceed in small steps at a brisk pace;
- give detailed instructions and explanations;
- provide many examples;
- ask many questions and provide ample practice;
- check for understanding;
- provide feedback and corrections, especially in the early stages of learning new material;
- divide independent assignments into understandable steps;
- monitor frequently during independent activities;
- allow practice until students achieve a high success rate and become quick, confident, and firm in their answers.

Phase 3: Assessment, Transfer, Reteach and Review

Teacher assessment of student learning brings the instructional process full circle. Assessment reveals what students have learned and retained. If a student adequately masters the material, it's time to move on. If not, the teacher must *reteach* the lesson using new strategies or methods. It is important not to reteach in just the same way the lesson was first taught; if reteaching is necessary, obviously, the first approach wasn't completely successful.

One part of the assessment step is to be sure that the student not only can remember the knowledge or perform the skill but that he or she can transfer that knowledge to other situations. Mastery learning advocates say that learning hasn't occurred until what has been learned can be *transferred* or applied to other situations. Although the assessment step provides the check that a teacher needs to be sure the skill or knowledge can be remembered and transferred, the action necessary to be sure transfer occurs must happen earlier in the teaching cycle. That is, the transfer or application of knowledge isn't something learned at the end of the learning cycle, it must be built into the earlier phases. For example, transfer is more likely to occur when plans have been made to teach concepts rather than facts. Thus, developing an understanding of "balance of power" will be more important for transfer to other situations than simply learning the names of the leaders of the various branches of the federal government. The reason concept learning is more likely to transfer than factual learning is because conceptual learning requires breaking a process or idea down into component parts and understanding how these parts work together. So, what you decide to have the student learn in the planning phase will affect later transfer. How the material is introduced and the instructional "set" is carried out also will affect transfer. For example, if the concept can be related to the learner's existing frame of reference it is more likely to transfer. Practically, this requires making the learning as relevant to the student's personal life as possible. The better one learns the concept initially also affects transfer. Thus, helping the student to discover sequences or elements they can use to structure initial learning increases the probability of transfer. The concept of overlearning, mentioned earlier, also plays a role here: during the independent practice phase of instruction, identified above, students need to master the material to the point that they are sufficiently confident that they will apply it to new situations.

Periodic *review* is one of the instructional functions that is described in the studies of effective teaching. Research suggests that this function should be part of each lesson although it occurs later, days or even weeks after the teacher introduces new material.

Teachers can assess student learning with tests, student games based on the lesson content, individual student work, or group discussion and review. Whatever the means, the end result is the same: students get a chance to use their skills and knowledge so that teachers can determine just how much has been learned.

Assessment and Review Tips for Teachers

- use a variety of means for assessing mastery; don't limit your repertoire to paper and pencil tests;
- create opportunities for your students to demonstrate their mastery of an objective by applying their knowledge or skill to a new situation;
- schedule regular weekly and monthly reviews to check for student understanding;
- make sure all students participate in reviews; don't assess mastery on the basis of a few volunteer responses to review questions;
- if the objectives have not been mastered, reteach the lesson using alternative strategies and/or materials.

RESEARCH REPORTS

The research on instruction provides a base from which teachers can make decisions which will promote academic success for all of their students.

Planning

In studies of teacher planning at the Institute for Research on Teaching, Christopher Clark found that:

- teachers reported spending about 13 hours per week in formal planning;
- planning revolves around students and activities, seldom around learning objective, as teacher educators suggest it should;
- planning is more explicit and involves a longer lead time in team teaching situations than in self-contained classrooms;
- planning not only helps teachers organize instruction, it gives them direction, security, and confidence;
- teachers undergo a four-step process when deciding whether or not to use an activity in their classrooms. First they try to understand the activity; next they imagine using it in their classroom; then they think of ways to avoid foreseen problems by modifying the activity; and finally, they create a mental image of the revised version.

Another planning task stressed in the research is assessing students' prior learning. Benjamin Bloom reports that the extent to which students have learned the basic prerequisites to the lesson being taught accounts for about 50 percent of the variation in student achievement during that lesson.

Teaching the Lesson

Most of the effective teaching research focuses on active teaching; that is, presenting a lesson or activity to students.

Barak Rosenshine, University of Illinois, has reviewed the major studies of effective teaching and identified the features of successful instruction common to each. He has organized these features around six "instructional functions." In chronological order they are:

- daily review;
- presentation of new content or skills;
- guided student practice to check for understanding;
- feedback, correctives, reteaching;
- independent practice;
- periodic reviews.

Rosenshine says that these are the functions successful teachers perform which are consistently related to higher student achievement and higher academic engaged time.

The instructional functions listed above and research findings listed below are based on seven major experimental studies: 1) Texas First Grade Reading Group Study (Anderson, Evertson, and Brophy), 2) Missouri Mathematics Effectiveness Study (Good and Grouws), 3) Texas Elementary School Study (Evertson, Emmer et al.), 4) Texas Junior High School Study (Evertson, Emmer et al.), 5) Organizing and Instructing High School Classes (Fitzpatrick), 6) Exemplary Centers for Research Instruction (Reid), and 7) Direct Instruction Follow-Through Program (Becker).

Daily Review

- daily review and checking of previous work assures that students have the necessary prerequisite skills to move on to the next lesson;
- less effective teachers review and check homework only 50 percent of the time, compared to 80 percent for effective teachers.

Presenting New Content and Skills

- effective teachers spend more time demonstrating concepts and skills than less effective teachers;
- problems occur when teachers give insufficient directions and explanations, assume children understand the material without checking, and introduce more complex material before earlier content has been mastered.

Feedback, Correctives, and Reteaching

- effective teachers teach new material in small steps to lessen student errors and misunderstanding

Guided Student Practice

- effective instructors offer teacher-led practice until students are confident with the new material;

- a high frequency of teacher-directed questions is important. Effective elementary teachers ask about 24 questions in a 50-minute mathematics period, compared to about nine from less-effective teachers;
- effective teachers spend more time than others in guided practice, asking questions, correcting errors, and repeating new material;
- elementary students need a great deal of practice;
- many opportunities for students to respond are important at any level (for example, frequent quizzes in college);
- a high student success rate is also important. High success rates are correlated with achievement grains;
- effective teachers facilitate practice to the point of "overlearning";
- frequent assessments of whether *all* students understand the content are necessary;
- in small group instruction, calling on students in ordered turns works best (when learning *basic* material);
- student group response (in unison) allows a high frequency of responses in a minimum amount of time. This works best in small groups, where the teacher can monitor individual responses;
- effective teachers respond to quick student answers by simply asking a new question and thus maintaining lesson momentum;
- correct but hesitant student answers require some process feedback, such as explaining again the steps used to get the correct answer;
- incorrect answers due to carelessness simply require a correction before proceeding;
- incorrect answers due to lack of knowledge indicate a need to 1) probe for answers by providing clues, or 2) reteach the material.

Independent Practice

- independent practice is necessary for students 1) to begin putting separate skills together to accomplish one task, and 2) to become "automatic" in their responses;
- independent practice allows students to learn to the point of "overlearning," when their responses become rapid and firm. This is the point at which new material is retained;
- most independent practice occurs during seatwork or homework. It can also occur in cooperative groups where students drill each other.

Periodic Review is discussed in separate section labeled "assessment."

Assessment

In his review of research on effective teaching, Barak Rosenshine reports that:

- Periodic reviews—monthly and weekly—reveal areas where students are weak and allow for reteaching in these areas;
- Reviews also reveal if lesson pace has been too rapid (if students consistently have trouble learning the material);
- Periodic reviews allow students to retain material better because they master it to the point of "overlearning."

Instructional Models

Instructional models are based on the findings of various studies and the work of several researchers.

When studying effective methods for teaching basic skills, Barak Rosenshine found that:

- Students taught with structured approaches do better learning basic skills than those using individualized or discovery learning approaches;
- Students who receive direct instruction from the teacher achieve more than those who are expected to learn on their own or from each other.

Additionally, when studying instruction, Jere Brophy, Institute for Research on Teaching, found that:

- most forms of "open education" and "individualized instruction" involve unrealistic expectations about how well young students can manage their own learning. Young students frequently don't understand what they are supposed to do or learn in school;
- teacher lectures and demonstrations are important, as are recitation, drill, and practice;
- if cognitive achievement is the goal, interactive, teacher directed instruction is clearly superior. *But other instructional approaches may be more appropriate for growth in non-cognitive areas.*

"Active teaching" is a term Thomas Good of the University of Missouri uses to describe effective instruction. In studies associating "active teaching" with increased learning, Good found that:

- structured programs produce greater student achievement than open programs;
- higher achievement gains are associated with orderly classrooms, persistent attention to academic tasks, teachers' active involvement with students, and a well-organized learning environment;
- lower achievement gains are related to students socializing and misbehaving, students choosing their own activities and seating arrangements;
- teachers who work with individual students for extended periods of time or on clerical tasks while students work have lower student achievement in their class;
- an increase in "active teaching" is associated with higher achievement across subjects and grade levels;
- lower-ability students and those who are anxious or dependent need more structure than others.

On the other side of the coin, there is evidence to suggest that *"direct instruction" is not best in all situations.* Researcher Jane Stallings found that:

- Students from highly structured classrooms take responsibility for their failures, but attribute their success to the teacher or other forces. Students from more flexible classrooms take responsibility for their successes but not their failures.
- Students in "open" classrooms are absent less, indicating a more positive attitude toward school.
- Independent behavior and cooperation are more likely found in situations where students select their own seating and grouping arrangements part of the time, choose from a variety of activities, and have access to an array of audio-visual and explanatory materials.

Further:

- Jane Stallings found that student time spent working in small or large groups is positively related to achievement;
- Fixed groupings of students by ability produces some unfavorable results. Eugene Howard of the Colorado Department of Education reports that ability grouping: 1) decreases achievement in low or average-ability groups, 2) reinforces favorable self-concepts in high groups and unfavorable self-concepts in lower groups, 3) deprives lower achievers of the stimulation of working with high achievers, and 4) carries a stigma more debilitating than the one of being a poor achiever in a heterogeneous group;
- Elizabeth Cohen of Stanford University also found evidence of the deleterious effects of ability grouping. Ability grouping, she reports, reinforces the negative self-images and low expectations held for lower-achieving students;
- Team learning approaches, where students compete in multi-ability groups, is clearly associated with increased achievement. (See the McREL Quality Schools Program folio, *Motivation*, for more information on team learning.)

Summary

Instruction is what teaching is all about. There are obvious differences among teachers based on personal style, preferences, and experience. But there is a vast body of knowledge demonstrating that all teachers should incorporate certain principles and techniques into their instruction to increase student learning and their own teaching effectiveness.

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ON THEIR OWN

Teachers recognize the value of students being "on their own" or working independently. There are several strategies teachers can use to increase independent learning:

At the primary level teachers should discuss the idea of working alone with children, giving them examples of independent working procedures, describing the teacher's role when they are working alone, identifying problems that may arise, seeking alternative solutions to solving the problem in advance, evaluating the usefulness of these alternatives, setting up routines for early finishers, debriefing students on their success at solving problems that arise during independent learning, providing reinforcement for independence, demonstrating the use of delayed response, and reviewing the procedure.

At the intermediate level, it is best to preface independent learning with an assessment of students' previous experience at working alone. (Refer to "Survey of Student Knowledge of Independent Learning" in Summer, 1981, *Noteworthy*) If a majority of students show limited knowledge of independent learning, take the time to teach the *student role*, the *teacher role*, and *work boundaries*. You may also want to distinguish between the following different types of independent work: 1) guided study, 2) cooperative planning, and 3) individual pursuit.

At the secondary level, a "learning contract" to help clarify your students' understanding can be used. Use the following checklist to be sure the "contract" is as comprehensive and helpful as possible:

1) Clarify what is to be learned.
2) Spell out how the skills/knowledge acquired will be demonstrated.
3) Identify the resources needed.
4) Set up the major steps/tasks to be completed.
5) List the checkpoints to measure progress.
6) Establish deadlines for completion of the contract whole and sub-parts.
7) Point out the next activity to be done.

We trust that with your guidance and their success, they'll look forward to "going it alone" again. (See *On Their Own* in Summer, 1981, *Noteworthy*, for further hints and explanation.)

Coaching
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Coaching

A Powerful Strategy for Improving Staff Development and Inservice Education

Why Coaching?

Staff development activities frequently are handled like a visit to the doctor. After an injection or a few pills in the form of a one-day inservice on a hot topic, the patient is expected to improve. Enthusiasm runs high, everyone has a good time and there is hope that things will get better. Unfortunately, the initial enthusiasm and commitment dissipate rapidly as the teachers re-enter the classroom, face the daily routine and have little time or support for thinking about or practicing new skills or techniques.

Clinical supervision is an improvement on this the traditional inservice approach. The principal regularly works in the classroom, observes the teacher's efforts to improve, models the desired behavior and gives feedback and support. Principals are only human, however, and they have the same pressures of getting through the day and meeting all the responsibilities they had before, with no time for their new assignment.

An alternative (or a compatible, additional) strategy to clinical supervision is "peer coaching": teachers meet in small groups and observe each others' classrooms to get feedback about their own teaching behaviors, experiment with new improved techniques and get the support they need.

Coaching, as a strategy for staff development, emerges from recent studies on the effectiveness of inservice education. Bruce Joyce, Judith Warren Little, Tom Bird, Beverly Showers and others have stressed the idea that people develop mastery and application of new skills best when they are placed in coaching situations.

Figure 1 shows how coaching enhances other adult learning strategies. For example, if only the traditional lecture approach is used, very low classroom application results. Even when demonstrations are added, relatively little long term impact results. Only the addition of coaching to the other techniques produces high levels of knowledge mastery, skill acquisition and classroom application.

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McREL is a public, non-profit organization, funded in part by contracts and grants from the National Institute of Education (NIE). The McREL staff members who contributed to this folio are: C.L. Hutchins, Susan Everson, Robert Ewy, Robert Marzano, Helen Chapman and Barbara Kessler. Other contributors include: Larry Mello.

Figure 1
TRAINING EFFECTIVENESS*

The degree of proficiency attained in knowledge, skill, and application is determined by the FIVE STEPS of the TRAINING DESIGN.

TRAINING STEPS	TRAINING STAGES Knowledge Mastery	 Skill Acquisition	 Classroom Application
THEORY (Lecture)**	Middle/High	Low	Very Low
+			
DEMONSTRATION	High	Low/Middle	Very Low
+			
PRACTICE & FEEDBACK	High	High	Very Low
+			
CURRICULUM ADAPTATION	High	High	Low/Middle
+			
COACHING	High	High	High
+			
PERIODIC REVIEW	High	High	High

Key: Very Low = 5%
Low = 10%
Middle = 40%
High = 80%

* from Bruce Joyce

** Note: the rows are cumulative; the strength of coaching rests on the total effect of theory, demonstration, practice, curriculum and coaching.

What is coaching?

What is meant by coaching; what is it? At a common-sense level coaching involves what a good athletic coach does; it:

- Allows the student/learners to set their own goals (a good coach would never force a student into basketball if his/her real interest were in track);
- Breaks complex skills down into small units that can be learned (a basketball coach will have a student practice one skill, such as dribbling, at a time);
- Provides an expert model of the integrated behaviors involved;
- Allows for ample guided practice when the coach checks the behaviors and provides corrective feedback (athletic departments have learned the value of videotape for providing clear feedback to students);
- Encourages independent practice to build skill integration, automatic response, speed and accuracy;
- Praises and rewards students when they win; reassures and supports them when they don't (there are even sports psychologists now who help individuals and groups with their emotional responses to a variety of athletic situations).

Coaching for teachers (or for students) is not much different.

What are the elements of coaching?

Coaching consists of two elements: (1) an organizational arrangement consisting of a support group, and (2) peer observation.

Before we describe the elements, keep in mind the general atmosphere that must exist if coaching is going to work.

- There must be a general perception on the part of the people involved that they are good but can always get better; they can always improve what they are doing. This general orientation has been found to characterize effective schools.
- The teachers and principals involved must have a reasonable level of trust developed. They are confident that no one is going to distort the situation into a punishing one. As Tom Bird says, "There is a way of talking and acting which separates the question of practice and its consequences from the question of people and their competence, and which separates habits from self-esteem. Then, the practices and habits can be put on the table and dissected while the person who uses them remains intact."
- There must be an interpersonal climate in the building that conveys the sense that people care about each other and are willing to help each other.

If these preconditions don't exist, they must be the initial focus of an improvement effort. Coaching can be used to build such conditions if it is approached slowly, voluntarily, and in a non-threatening manner. It can't be started out in its full blown form if these conditions don't exist.

1. The Support Groups

The support group consists of three or four coaching teams. Each coaching team consists of two or three teachers who observe each other. Although a two-person team is satisfactory, sometimes three people are better because a third person added to the group reduces the effects of personality conflicts. Thus, the support group consists of from 6-12 people (nine or less would be best) organized into three teams.

The purpose of the support group is to provide professional stimulation, practical help based on the expertise of other teachers and personal support to those who are trying to improve their teaching.

Support groups meet on a regular basis, for example, every two to four weeks. (In between support group meetings, members of the coaching teams meet and carry out their peer observations.) Suggested topics for support group meetings would be as follows:

- Develop a mutually agreeable agenda, including a delineation of issues and concerns to be discussed, how much time will be spent on each problem and the priority that will be given to each.
- Review progress from the last meeting, including feedback from team members who were observed since the last meeting. (It is best if the person who was observed initiates this discussion and describes what he or she tried and learned; that person can involve the peer observer if desirable.) During this part of the meeting and throughout the entire process it is important that no judgments be expressed by others or advice given that is not solicited.
- Identify new teaching behaviors and activities on which individual participants or coaching teams will work before the next support group meeting. Problems should be stated as behaviorally as possible (e.g., "I want to reduce the number of oral outbursts from one of my children"). The person identifying a problem should be asked to clarify it by answering questions about how the problem occurs, when it occurs, what he or she is trying to accomplish, what has already been tried, etc. Other teachers should be asked what they have done that worked in similar situations. Avoid advice-giving; just describe what worked for you. (In McREL's Effective Schools Program, the new "problems" usually are assignments to try out new teaching strategies. For example, teachers may be asked to observe each others' classroom regarding student engaged time, new discipline methods, or an innovation like team games. In these situations the support group discussion might focus on the particular assignment, what it calls for and how best to carry it out. The team might also decide to seek ideas for improvement from sources beyond the experience of the group. In this case individuals might agree to identify ideas, programs or other resources that can be brought back to the group. There are many places teachers can turn to for help: a local or state teacher center, the state National Diffusion Network Facilitator, the nearest regional laboratory such as McREL, a college or university, ERIC, or a host of professional publications such as *Educational Leadership*.)
- Finally, the meeting should have closure. Actions that have been decoded upon should be summarized and those who have agreed to do something before the next meeting should commit themselves to taking action.

The work of the Support Group will be more effective if a facilitator and recorder are selected to organize and conduct the meeting. The facilitator is like a chairperson or moderator; he or she makes sure the meetings begin on time, that the agenda is developed with everyone's involvement, that everyone contributes, that no judgments are made and that the meeting is adjourned on time. The recorder uses newsprint to keep a record of the proceedings so that the next meeting can begin where the last left off and so that the agenda and action items are clear to everyone.

From time to time the group should also discuss the coaching process itself. The focus should be on the value of the process ("What helped you the most?"), particular strategies that worked well ("What things did the "coach" do that were most helpful?") and things that could be improved—this might be better handled by the coaches describing their experiences as coaches rather than teachers talking about their concerns as observers. Agreement to continue the process and institutionalize it should be an important purpose of this discussion.

2. The Coaching Teams

The work of the coaching teams consists of the following.

Discussion and Planning—(Pre-observational Meeting) Once the improvement focus which the team or individuals in the team are going to work on has been decided, members of the coaching team must develop a clear understanding of what specific behaviors or actions must take place to implement the desired changes. They must be sure the two or three team members understand the desired outcome or purpose of the activity and the specific steps that must take place to ensure that it is implemented. The situation will be different if each team member is working on their own, individual plans than if the team is working on something together.

At the heart of the discussion must be a clear delineation of the actions that the observer is supposed to record. The actions should be defined as behaviorally as possible. Developing an observation checklist is a good way to do this, depending on the specific innovation involved. For example, if one were trying to implement "Student Team Learning"* in the classroom some of the items on the checklist are described in the accompanying box.

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* See McREL's *Noteworthy*, Summer, 1981, for a discussion of "Student Team Learning"

SUGGESTED CHECKLIST FOR OBSERVING THE IMPLEMENTATION OF STUDENT TEAM LEARNING

- The teacher explains the activity and checks students' understanding.
- The teacher assigns the students to learning teams of 3-5 in size so that each team contains students of different levels of attained skill or performance in the subject area. Each team, therefore, is composed of a high performer, a low performer and one to three students with mid-range performance.
- The teacher clearly explains the assignment both orally and in writing. S/he checks for understanding. S/he provides the students with a model of the desired performance and a list of resource materials that should be used or consulted to develop mastery of the materials.
- The teacher follows up with the groups during the period of independent work by providing them with a diagnostic tool to ascertain how they are doing, and coaching them about their interpersonal-group productivity.
- The teacher regroups the students into competitive teams following the study period (usually 3-4 days after the assignment has been given). The competitive teams are homogeneously constructed. That is, the competitive teams are formed so that the highest performers will compete among themselves in groups of 3-5; the lowest performers will compete among themselves, etc.
- During the competitive "testing" students will be provided with appropriate materials: e.g., a deck of cards for randomly distributing the order in which questions are asked, a set of objective questions, and an answer key.
- The teacher explains the competitive process, checking for understanding.
- The teacher provides one or two rounds of guided practice.
- The teacher lets the groups independently compete, walking around and providing assistance during the process as necessary.
- The teacher properly scores each team's work, announces the outcome, and supports students by helping them understand that work, not luck, was the reason for success and that Student Team Learning increased the opportunities for everyone to be successful.

Having such a checklist has two obvious advantages. It provides the person learning the activity with a clear understanding of what is expected and it provides the coach or observer with a clear, objective list of things to watch for.

Observation. Once everyone is ready, the teacher scheduled to conduct the observation does so. (If three teachers are involved, Teacher A observes Teacher B, who observes Teacher C, who observes Teacher A.) Students are prepared for the observation. For example, you might tell the students "Mrs. Smith, Mr. Ortega and I are working together to develop some activities that we think might help you learn more effectively. Mr. Ortega will be in the room tomorrow observing us as we try out a new way to develop group or team learning; he will be helping me decide how well it works. Please don't pay any attention to him. He will just be sitting in a chair up here in the corner making some notes. He won't participate in our work."

During the observation the observer should look only for the behaviors or activities that were agreed upon. The observer is not in the room to evaluate or pass judgment on the teacher. He or she should simply check to see what happens and record what is observable: "You did this . . . and then they did this. . . ."

If a detailed checklist has not been developed for the "coach" or observer to use to document what transpires in the classroom, a detailed log or script of what transpires should be kept. If complex student-teacher interactions are involved a tape recorder or, perhaps, even a videotape recorder might be used.

The use of a log or script helps avoid misunderstandings. It enables the coach to say things like: "After you corrected Johnny I watched him closely for the next few seconds. What he did was. . . ." This approach avoids making a value judgment such as: "You really weren't successful with Johnny because. . . ."

A check sheet or other instrument (such as McREL's Academic Efficiency Instrument) helps keep the feedback session objective as well. For example, it might enable the coach to say: "I measured your students' 'engaged rates' as you asked me to and here are the data I collected for 20 minutes." The more specific the teacher has been about what s/he wants the observer to watch for and record, the less threatening it is for both parties.

Feedback. As soon as possible after the observation period has ended the observer (coach) and teacher should meet to discuss what happened. This can be done with the third member of the team present or not—most prefer just a one-on-one between the observer and teacher. (It would be best if the principal did not attend this session unless s/he has been involved in the observation or unless the observed teacher wants the principal there.)

During the feedback session the discussion should be as objective as possible. It is usually best if the person being observed leads the discussion so the coach isn't in the position of pressing his/her view on the teacher. For example, the session might begin by having the coach ask the teacher: "Why don't you tell me how you think it went—what went right or what went wrong and I'll share with you information that supports your own thoughts as well as things I might have seen that you didn't see." Usually the person observed has a pretty good idea of how things went and can save a lot of time and awkwardness by pointing out what he or she already knows. Then, the coach can say, "Why don't we just go down the checklist" (or whatever instrument was used) "and ask me for information about what I saw."

Thus, the observed teacher might go through the checklist and ask informational (rather than judgmental) questions: e.g., "What did you see when I was checking for understanding? Could you see any students who had problems I didn't address or did you see any of the students give signs (e.g., non-verbal signs) that they didn't understand even after I re-explained things to them?" If the person observed keeps pressing for information it will make it easier for the coach. Then, at the end of the discussion the coach should be asked if there were other observations made that would be relevant.

One of the absolute essentials in coaching is to be sure the relationship between the coach and the teacher is as professional as possible:

- Never talk to a third person about what was specifically observed.
- Don't let a member of the team draw the others into personal problems.

At the next support group meeting the facilitator should ask the person observed what happened, what was learned, etc. The facilitator should never ask the coach to comment. Only the person who was observed can bring the coach into the discussion; and, if he or she does not, the coach should not volunteer anything that was seen during the observation.

How do you implement the coaching process?

Attending to the process used to implement a coaching system is almost as important as the coaching activity itself. Without proper concern for the implementation process the effort to improve the staff development program probably won't succeed.

Here are some suggestions for setting up teams:

- The building principal should endorse and encourage the forming of the coaching teams and support groups.
- Coaching teams should form naturally from small groups of people who like and respect each other. (The principal may need to initiate some suggestions for membership to be sure all those who want to participate are included.)
- People who don't want to participate shouldn't be forced to participate although they should be encouraged to sit in on a team if the team is comfortable having them do so.
- Specific expectations about the number of observations and coaching follow-up sessions should be established at the beginning.
- Specific times should be set aside for the observation and follow-up sessions.

At a broader level, you may want to think about the implementation process by drawing a parallel to the steps suggested by figure 1; i.e., providing a theory orientation and demonstration of coaching with a practice and feedback stage. Thus, a sequence for implementing a coaching process would be to:

- Provide an orientation to the process and the theory by discussing the idea at a staff meeting; this artcicle could be distributed as background reading.
- Demonstrate the process through role playing or by showing McREL's videotape on coaching.
- Give the staff an initial opportunity to practice coaching using a simple procedure such as McREL's process for measuring academic efficiency. Under such an arrangement the initial support group session would be used to introduce the process. Everyone would practice making observations and the follow-up support group sessions would focus on a discussion of the nature and value of what occurred.
- Modify the process for conducting peer observations to satisfy the unique nature of your school and staff; and
- Follow up with coaching sessions on the coaching process.

Another model for approaching the implementation process is provided by the "Concerns-Based Adoption Model" (CBAM), developed at the University of Texas. It provides an empirically valid model of how implementation works. Basically it suggests that while implementing a new behavior or set of skills people go through very predictable stages. At each stage implementors express different kinds of concerns and have different information needs. The seven stages of concerns are:

If you think about how teachers would approach the implementation of coaching to improve staff development, you can easily imagine how their concerns would follow in the order suggested by Figure 2. First they'd want to know what it was and what it's supposed to do. But, soon, they'd worry about whether they would be embarrassed by teaching in front of their peers, whether it was really a subterfuge for personnel evaluation, whether they could work well with members of their peer team, etc. During this period it would be very important for the principal to provide support and information that is directly related to these concerns and not push too rapidly into the observations.

Once teachers have moved beyond the personal level of concern they would want much more information about the innovation. Once teachers have tried the coaching innovation and are using it at the "mechanical level", they will want to know if it is producing the promised results.

The CBAM stages of concern are a great help to the person responsible for leading the implementation/change process. The model tells him or her how to assess process along. For example, by asking participants what their concerns are and by listening carefully a leader can usually identify the stage of concern. It is essential that the leader focus on that level of concern. If the leader ignores the messages and moves ahead, the implementation process may be disrupted.

Figure 2

STAGES OF CONCERN ABOUT THE INNOVATION*

0 AWARENESS: Little concern about or involvement with the innovation is indicated.

1 INFORMATIONAL: A general awareness of the innovation and interest in learning more detail about it is indicated. The person seems to be unworried about her/himself in relation to the innovation. S/he is interested in substantive aspects of the innovation in a selfless manner such as general characteristics, effects, and requirements for use.

2 PERSONAL: Individual is uncertain about the demands of the innovation, her/his inadequacy to meet those demands, and her/his role with the innovation. This includes analysis of her/his role in relation to the reward structure of the organization, decision making, and consideration of potential conflicts with existing structures or personal commitment. Financial or status implications of the program for self and colleagues may also be reflected.

3 MANAGEMENT: Attention is focused on the processes and tasks of using the innovation and the best use of information and resources. Issues related to efficiency, organizing, managing, scheduling, and time demands are utmost.

4 CONSEQUENCE: Attention focuses on impact of the innovation on students in her/his immediate sphere of influence. The focus is on relevance of the innovation for students, evaluation of student outcomes, including performance and competencies, and changes needed to increase student outcomes.

5 COLLABORATION: The focus is on coordination and cooperation with others regarding use of the innovation.

6 REFOCUSING: The focus is on exploration of more universal benefits from the innovation, including the possibility of major changes or replacement with a more powerful alternative. The individual has definite ideas about alternatives to the proposed or existing form of the innovation.

* Original concept from Hall, G.E., Wallace, R.C., Jr., & Dossett, W.A. "A development conceptualization of the adoption process within educational institutions." Austin: Research and Development Center for Teacher Education, The University of Texas, 1973.

The Role of the Principal

The principal is a key actor in creating the conditions and incentives that will support the development of a coaching system for staff development. For example, he or she must take responsibility for creating the conditions mentioned at the beginning of this article (the belief that everyone can improve, a high level of trust, and an interpersonal climate of caring and support).

In addition, s/he must work to actively create a sense of collegiality in the building. This term has been used by Judith Little to describe the characteristic she found in successful schools. By the term collegiality she means an environment in which the norm or expectation is that the staff will work cooperatively to exchange information and support one another to improve instruction. For example, informal conversations occur in the staff lounge or elsewhere that focus on school improvement. Staff meetings devote time to improvement rather than to housekeeping matters and "administrivia." Teachers visit each other's classroom and the principal spends a significant amount of his or her time interacting with teachers about instructional matters.

How does the principal do this? (See Figure 3 for a more complete statement of the steps listed below).

First, the principal must *announce* his or her expectation that collegiality and coaching is a part of the school's values. He or she must explain what is meant by the terms, examples of how they already exist and how everyone can contribute to building collegiality.

Second, the principal must model the processes; this might be done by inviting discussion of some of his/her own activities, encouraging suggestions for improvement and, perhaps, by inviting another principal to act as a coach to him or her.

Third, the principal must sanction or reward the desired behavior by giving teachers credit and recognition for their efforts and spreading news of what's happening.

Fourth, the principal must defend those who are taking the risks to spread the sought-after practices. He or she can provide the rhetoric that defends the approach, publicize it with the central office and secure its approval.

In addition, the principal is responsible for arranging for the logistics of coaching: setting aside the time for the support meetings, facilitating the time for the team observations and generally being available to troubleshoot the process and provide assistance when requested.

It will probably be best if the principal does not actively participate in the support group meeting or the team meetings unless his or her help is specifically requested. In the initiation of the process, particularly the demonstration stage, he or she might be more visible. It will be best, in the long run, if the principal works to create a self-sustaining coaching system among the teachers themselves. Whatever else, the principal must avoid making judgments about teacher performance as part of the coaching process.

FIGURE 3

MANAGEMENT TACTICS FOR SCHOOL IMPROVEMENT PRIORITIES

RANGE OF INSTRUCTIONAL LEADERSHIP PRACTICES		PRACTICE THAT *PERMIT* TEACHERS' NORMS OF COLLEGIALITY AND EXPERIMENTATION		PRACTICES THAT *STRENGTHEN* OR *STIMULATE* TEACHERS' NORMS OR COLLEGIALITY AND EXPERIMENTATION	
Announcing expectations	Describe, explain it to teachers who ask	Add it to a list of "things we've got going this year" during the first faculty meeting	Announce that some teachers have been exploring some well-tested ideas and will be trying them out with your (principal) encouragement	Announce that you and some teachers have formed a small team to test some worthy ideas, will keep everybody posted on the trials and tribulations, and that the effort can be expected to require a chunk of principal's time	Announce that a practice is sound enough that all are expected to use it
Modeling or enacting (plan for observations or assist with it)	Arrange time, materials, and assistance for teachers to plan Arrange for consultant observation/conference with teachers	Review teacher's plans Join consultant in observation and conference	Plan with teachers a sequence of implementation Conduct regular meetings with teachers to hear how it's going	Plan with teachers for course units, lessons, and materials Conduct regular classroom observations of at least 50 minutes using clinical supervision cycle	Plan with teachers to refine, adapt, etc., in the face of difficulty Cover classes so teachers can observe one another
Sanctioning (rewarding it)	Provide teachers access to materials, assistance, time, university credit	Spread news of progress in informal contacts with other teachers, administrators, school board members, etc. (fame)	Offer an altered teacher/principal relationship stressing collaboration	Offer specific feedback on progress based on discussion and observation	Invite teachers to act as consultants outside the school
Defending or Protecting	Leave disinterested teachers a graceful way out in early stages	Read enough and talk enough to be able to lay out the rationale for the approach	Find ways to support other teachers who display initiative	Accumulate "practical" instances of how the approach looks in the classroom and what the effects are	Arrange for teachers' involvement to satisfy other district requirements

Escalating effects

Adapted from Judith Warren Little's *School Success and Staff Development*.
Center for Action Research, 1981.

Escalating demands

A Description of
The Mid-continent Regional Educational Laboratory's

Effective School Program
(ESP)

OVERVIEW

The Effective Schools Program (ESP) is a systematic, staff development program designed to foster self-sustained improvement efforts at the school building level. The ESP is research based. It synthesizes research findings on effective teaching and instruction, on effective schools, on effective building leadership and organization, and on curriculum and assessment. Equally important, the staff development processes used are based upon research findings in the areas of planned change and adult learning.

Goals and Objectives

The goals of the ESP are:

- to provide successful learning opportunities to *all* students who attend school; and
- to develop and/or enhance a school improvement process which is continuous cooperative and self-renewing.

To accomplish these goals, ESP bases activities on objectives designed to help participants:

- gain knowledge about the effective schools and teaching research;
- master diagnostic procedures to compare their school with the characteristics of an effective school, as described in the research;
- select alternative strategies to improve performance in areas of need indicated by the analysis of diagnostic procedures;
- implement the relevant strategies;
- develop an assessment system to document improvements in student achievement and other performance outcomes resulting from ESP activities.

THE ESP APPROACH—THE "HOW"

Orientation. Initially, McREL staff members meet with key decision-makers in the district. At this time, a variety of strategies to share information can be used as first steps; presentations, meetings, and written documents are examples. The purpose of the orientation process is to build commitment and ownership to ESP and to provide a professional perspective in which educators with varying levels of knowledge and expertise can work toward a common goal. This professional perspective differs from a strictly consultive arrangement because each player—McREL's staff members, central office administrators, board members, building level principals and teachers—are expected to bring expertise and information to the effort, rather than an external consultant dispersing all of the necessary information. This sets a framework for the next phase which is Program Planning.

Program Planning. Once the framework has been set, McREL staff and school district representatives plan the future collaboration jointly. The meeting schedule, participant selection, materials development, and assessment activities are examples of the topics which this planning team addresses. The key issue of joint planning is the melding of the McREL-ESP requirements with the individual needs of each district. Thus, negotiation becomes a natural part of planning team discussions.

It is important to note there are some ESP requirements McREL staff will press for in order not to damage the success of the effort. These requirements include:

- Team size from one building should be fewer than nine: 4-5 teachers and the principal are best. Leadership teams and large committees are not the same. Leaders must work together to manage problems, make decisions, supervise change, and assess success. Too large a group cannot develop the unity needed to carry out these leadership functions.

- A maximum of fifty participants can attend each leadership team training session. That would mean, for example, 9-10 building level teams of 4-5 each. The interactive nature of activities and the need for group discussion demands the total group remain a manageable size.

- Central office support is essential. A single school building staff wanting to participate without the support of its central administration has little chance of carrying out the changes which are necessary to produce results. Questions of curriculum, testing, grading, and evaluation are examples of critically important program topics which are not specific to individual buildings.

- Leadership development training days must be spaced four to six weeks apart. The wealth of information is overwhelming to the participants if introduced all at once. Participants use time between sessions to reflect, use activity suggestions, assess needs and observe instruction.

- Leadership team members must administer the diagnostic instruments that are part of the Effective School Program. Diagnosis is an integral part of all aspects of the program.

- The membership on the leadership team must remain constant. Team members must attend all the sessions unless an emergency interferes in which case, no substitutions are suggested. The unity of the team is, again, the issue.

- McREL staff returns the diagnostic instrument profile to the leadership team. The team members decide if they want to share the information and if so, how they will do so. Central office administrators and the building teams do not automatically have access to the diagnostic information of the team.

Leadership Development. The core of the ESP is the development of building leadership teams. The team develops or enhances its leadership skills so it can guide site-specific efforts to implement the research on instructionally effective schools and classrooms. The ESP approach to this leadership includes:

> **Information Presentations.** These activities are used to establish a common understanding of the literature base for effective schools and teaching, curriculum and assessment, building level leadership and organization, and school change. Common knowledge about the content is essential for any decision-making team. Using video tapes and other prepared materials team members will develop the capacity to conduct their own presentation at the school level.
>
> **Demonstrations.** The McREL-ESP staff models various leadership behaviors for the teams. Problem-solving, decision-making, supervising, "coaching" and team building are included. Additionally, the McREL presenter demonstrates the use of instructional methods, observation techniques, and other strategies for implementing improvements that the team may choose to use with their own staff.
>
> **Materials Support.** McREL provides materials and resources which support the leadership teams as they plan and make decisions about implementation strategies.
>
> **Feedback.** Just as teachers need feedback ("coaching") while trying to enhance their instructional skills, the leadership team members need feedback as they carry on their work. The McREL-ESP staff members provide a sounding board, by planning with, talking with, and giving feedback to leadership team members.
>
> **Planning.** Traditionally many educators have viewed planning as an activity to complete for someone else. Teachers plan for principals, who plan for the central office administrators, who plan for the board of education or state department staff. Planning by the leadership teams is an activity they carry out for themselves. The plan is a guide for their own work as building leaders. It is important to note they alone do not develop a school-wide, school improvement plan. Instead, they may include as part of their plan an objective to develop a school-wide plan. The first activity under such an objective would be to get the rest of the building staff involved in the process. If any positive movement is going to occur, the leadership team must *lead* the building in that direction.
>
> **Facilitation and Team Building.** A school's sense of collegiality can be created or enhanced by the actions of the leadership team. McREL staff members present suggestions and disseminate resources for the teams to use with their full faculties to build a team approach to change and growth. In the long range the most important outcome of the ESP will be a new sense of collaboration and cooperation among staff members.

The key issues in the McREL-ESP leadership team development, then, are the provision of high-quality, substantive information based on research skill development in the use of specialized diagnostic instruments, and the provision of realistic suggestions for implementation of that information in the real-life environments of schools and classrooms. Further, the McREL-ESP staff believe that the leadership team members are able to make decisions and carry out plans when appropriate information has been shared. This important belief positively influences the relationship between the McREL staff and the ESP participants, i.e., a relationship among professionals working collaboratively for the improvement of education opportunities for all students in a school building.

The Long-Term Relationship. Ideally, the Laboratory's relationship with ESP participants continues from one to five years. During the first year, which is basically an assessment, planning, and leadership development year, the Laboratory staff members guide the process and are directive in choosing the topics and activities which are addressed by the leadership teams. Following that first year, the McREL role changes and the McREL staff members become resource/support personnel who are responsive to directions and requests from the school teams. For example, in this role the staff member visits schools, to meet with leadership teams in review sessions, provides feedback of plans and activity reports, connects teams from different districts who want to talk with one another about mutual concerns, and disseminates research and resource materials which are pertinent to the plans and activities of each leadership team.

The key issue of the long-term relationship is the establishment of a continuous feedback and resource support system. That system provides the leadership teams with a mechanism through which evaluation, renewal and revision activities can be developed. Those activities are critical elements in successful long-term improvement efforts. Without evaluation, renewal and revision, the impact of school improvement activities is short-term and superficial at best.

If possible McREL encourages the development of this long-term relationship by helping to build the capacity of a nearby state education agency, university or service agency to provide the necessary follow-up. If this approach is possible, it needs to be built in from the beginning of the program.

PARTICIPANTS (THE "WHO")

The development of the building level leadership teams is a critical element of the ESP. Each leadership team represents a school building and is composed of teachers and the principal from that building. Teachers typically are drawn from the building's various grade, content, and specialist areas. Through the McREL-ESP, team members become leaders in fostering school collegiality, carrying out the tasks of identifying school goals and priorities, designing a leadership team plan, selecting activities leading to increased effectiveness, and assessing their own progress in implementing changes.

Specific information regarding ESP team participation includes:

1. The principal must *always* be a team member, attending every session, participating fully.
2. Teams should never be larger than nine: eight teachers and the principal. Normally, elementary schools have four member teams and secondary schools have six to eight member teams.
3. The teams remain constant through the first development year of the program. New members or substitutions are not added.
4. Team members should represent the make-up of the school both by grade levels and subject areas. In other words, a music or art teacher can represent the fine arts area. Guidance counselors usually make excellent team members.
5. The selection process will vary from building to building. Some school principals ask for teachers to volunteer, some ask specific teachers to participate, and in several schools the faculty voted on representatives. Nominated team members ought to be free to reject an invitation to participate. The important thing to remember is that participants need to be respected by their peers.
6. An orientation session for teachers before team selections is often helpful to the selection process.

McREL staff members can work with a maximum of fifty people in each workshop session. Usually teams represent one school district, although small districts do cooperate for joint workshop sessions.

Observers (central office staff, parents, etc.) may attend the workshop sessions if the district decision-makers want to include them. The total of fifty per session *includes* observers.

Each district must designate a contact person to coordinate the ESP locally. That person should have decision-making power and must attend all sessions, both planning and workshop sessions.

THE CONTENT (THE "WHAT")

There are five general areas which make up the topics of the team workshops. They are:

Teaching and Instruction. In this area topics are addressed which enable participants to assess their own behavior in light of the characteristics of effective classrooms as defined in the research. By becoming familiar with the research on the management of time, the organization of instruction, and the expectations communicated by teacher actions, team members realize the significant impact of teaching and instruction on student learning. Other concepts included in this area are task analysis, instructional strategies, instructional models, classroom management, student management, reinforcement, motivation, and diagnosis of student needs.

Building Level Leadership and Organization. This area draws upon the research that describes characteristics associated with school effectiveness at the building level, e.g., building leadership, school culture, school organization, building goals, collegiality and parent involvement.

Curriculum/Assessment Relationship. Key concepts in this area include test content analysis, test result analysis, curriculum alignment, textbook content analysis, test-taking skills and higher order thinking skills. Team members examine what tests measure and what test content is taught in their buildings. They also acquire skills to determine exactly what they want to teach to students, what materials should be used to accomplish this, when teaching should take place, and how to accurately measure whether students have learned what was intended.

Facilitation and Change. In this area, team members gain an understanding of their role as leaders in the planned change effort in their schools. They learn about barriers to school change, effective listening, conditions for creating change, cooperation, and collegiality. By becoming "coaches" for each other, team members model for staff members the behaviors necessary for implementing successful improvements in their buildings. The objective is to have team members realize that effective communication and collaboration are essential to school improvement.

Planning. After each leadership team has used instrumentation to gather assessment information related to their building, they develop a leadership plan. The plan specifically addresses the team's leadership role in an improvement effort by describing manageable steps to the improvement which the team facilitates in their school. The team members describe where they (and the school) are now and where they want to be one year from now. The activities which the team plans are systematically designed to provide a base for leadership decisions regarding the changes which need to occur during that year. The key issue here is that the team writes a plan for its own work, not a plan for the entire school faculty. If the team believes a building-wide, school improvement plan is important, team members design activities to include the entire faculty in the development of that plan.

Improve your school!

DYSC—Something New from the Mid-Continent Regional Educational Laboratory:
"Describing Your School's Characteristics"

DYSC is a *diagnostic self-assessment* for schools. It is based on the belief that the more educators know about themselves and their performance, the better able they are to make decisions about how to improve.

DYSC is a *measure of* administrators' and teachers' *perceptions* about what happens in a school. These perceptions are quantified and displayed as a profile to make them easier to inspect. The process of assigning numbers to perceptions does not make perceptions more accurate or a better reflection of reality, but does provide a starting point for deciding where to begin a school's improvement effort.

DYSC *was developed from research on effective schools.* It is descriptive rather than prescriptive. Generally, the characteristics assessed were true of schools which were effective in teaching all students. .

DYSC is *machine scorable.* Order the number of questionnaires needed, administer them to a faculty and return them to McREL. We will send out the results within 10 days from the time we receive them. The results are accompanied by detailed explanations of the findings. DYSC cost $25 per school. For this price you will receive:

One Teacher's Version, DYSC for each faculty member for up to 30 teachers. Schools requiring more than 30 questionnaires may purchase additional forms for $.50 each.
One Administrator's Version DYSC for the school principal. Schools requiring more than one, may purchase additional forms for $1.00 each.

Instructions for administering DYSC (1 page handout)
Graphic display of school results
Item Results (9 page printout)
Interpreting Results for DYSC (6 page handout)

If you have any questions, please contact: Bob Ewy, Program Associate, 303-337-0990 or Susan Everson, Director of Field Services, 816-756-2401.

APPENDIX B.

Information Technologies: Alternative Delivery Systems for Rural Schools

REPORT UPDATE

INFORMATION TECHNOLOGIES:
ALTERNATIVE DELIVERY SYSTEMS FOR RURAL SCHOOLS

A Report to the

Mid-continent Regional Educational Laboratory

Paul Nachtighal, Rural Education Project Director
C.L. Hutchins, Executive Director

By
Milan Wall
President & Senior Consultant
Wall & Associates
Lincoln, Nebraska

November 20, 1985

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PREFACE

This is an update of a report first commissioned in 1984 by the Mid-continent Regional Educational Laboratory (McREL) as one response to new challenges facing rural school districts.

Among those challenges are increasing demands upon all high schools to offer expanded curricular opportunities, especially in those disciplines directly associated with a renewed emphasis on educational excellence.

Such disciplines typically include foreign languages, mathematics and the sciences, as well as disciplines often associated with enrichment, such as art and music.

Through its rural education program, McREL encourages finding creative solutions to problems unique to rural schools in its service region: Colorado, Kansas, Missouri, Nebraska, North Dakota, South Dakota and Wyoming.

While the information included here was prepared specifically for school policy makers in these states, schools throughout the nation face similar challenges. Thus the information contained in this report may be useful to rural schools located elswhere, as well.

Milan Wall
Lincoln, Nebraska
November 20, 1985

INTRODUCTION

This report focuses on three topics of potential interest to rural school policy makers:

1. Technological delivery systems currently available or in field test stages which rural schools might use to expand or enrich curricula for high school students facing new graduation or college entrance requirements.

2. Profiles of 20 projects, each employing modern informational or telecommunications technologies to expand access or quality for instructional offerings.

3. Information technology-oriented delivery systems already available throughout the McREL service area which might be employed by rural schools in response to problems of curricular breadth or depth.

While information is contained here on such highly advanced technologies as direct satellite communications and interactive videodisc, the focus of the report is on those delivery systems that schools might employ immediately.

Current availability was one of several operating assumptions which guided the preparation of these materials. Among others:

* Resource sharing among schools -- such as sharing of teachers or costs of equipment and operations -- is a probable model for rural schools.

* Schools will respond more favorably to those technologies which are not only currently available but also subject to trial without tremendous expense.

* Delivery models should take into account some combination of technologies and face-to-face supervision or direction.

* Different schools will respond to different models as holding the most potential for their respective situations, and thus no one model will solve all schools' problems.

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INFORMATION TECHNOLOGIES AVAILABLE TO RURAL SCHOOLS

A variety of information technologies have been adapted recently for use as carriers of educational materials. Ranging in sophistication from a network of telephone lines to a network of computers linked by transponders on SATCOM I, they offer intriguing possibilities for rural schools.

Few such technologies can be seen as offering "stand-alone" delivery capability, however. Educators need to remember that books remain the major carrier of information, even in a technological age. In fact, most examples of successful uses of technologies combine several modes of delivery into a coordinated or packaged approach.

Audio Teleconferencing

Teleconferencing implies the capability of having a conference or two-way conversation using telephone or audio technologies. Many of the telephone networks now in place use a four-wire dedicated system leased from a telephone company to link many locations in the state to a single communication system. Often this dedicated network can be connected to a variety of other locations, both within and outside of the state, by use of a teleconferencing bridge, which allows the user to set up long distance conference calls just as a long-distance operator would.

Expenses for audio teleconferencing include the rental of the lines, as well as purchase of inexpensive speaker phones or conferencing microphones. A teleconferencing bridge can be purchased for about $30,000.

Videotape Lessons

Distribution of videotape lessons to learners at remote sites is a cost-effective method of upgrading curriculum offerings. The tapes themselves offer no opportunity for two-way communication between student and instructor, but the increased quality of instruction and the ability of students to stop and replay sections of lessons counter-balance this shortcoming.

The tapes themselves may be pre-produced, which allows for high standards of content and presentation but also increases developmental costs and adds time for production. Or they may be "candid" tapes of classes taught in a regular classroom setting. "Candid" programs are much less expensive to produce, and the instructional quality is as good as the instructor whose class is being recorded. Such tapes are rarely saved, but rather are erased so new lessons can be recorded over previous lessons.

Major expenses are the production facilities (obviously less for "candid" lessons) and distribution costs of getting the tapes to the learners in a timely manner.

Interactive Television

Real-time two-way visual contact between instructor and student is possible with technology on the market today. Carriers of the television signal can be microwaves, cable television systems, satellites, or low-power or sideband signals carried on a regular broadcast signal.

Most systems involve schools that are fairly close geographically. A teacher in one school also has television students in

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neighboring schools. The teacher can see and often hear remote students via interactive TV. Microwave and cable signals can accomplish this with relative ease, while satellite-linked schools need uplink facilities from each location to achieve the same goal.

ITFS incorporates an audio return in most cases, but does not handily accomodate two-way visual interaction without development of another complete system duplicating the service area of the first.

All such systems increase costs significantly over use of existing audio networks or videotape playback.

Interactive Video

Blending microcomputers with a video storage unit allows the learning sequence to be controlled by student performance. Either videodiscs or videotapes can be controlled by the computer program. Videodiscs have the advantage of total storage capacity, since they can store 54,000 frames of video on each side of a laser optic disc which is not subject to wear. Video tapes are less expensive to produce and the equipment is more readily available, but individual bits of information cannot be accessed as easily or accurately.

Schools may be able to take advantage of computers they already own to combine with a video system. Since lessons are driven by the computer program, sections of the disc or tape that become outdated can be skipped. The computer program can be updated as needed, and changes in the program can be forwarded to

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participating schools through a telephone modem or other computer link.

The branching capabilities that exist in such systems can contribute to very efficient use of student and equipment time, since information that is not necessary for a given student can be bypassed by the program.

Costs for equipment are dropping rapidly, and student stations may soon approach the affordability range for most schools. Availability of programming remains a problem, due to high developmental costs and the confusion of competing technology standards.

Computer Networks

Either individual microcomputers or terminals to a mainframe computer can be linked in a variety of ways. Most frequently, a mainframe is surrounded by a swarm of terminals connected to its memory by wires. A series of microcomputers can serve as terminals for a larger comptuer, with the advantage of on-desk storage capacity. Not all of the calculations or uses require the mainframe to be connected, but it can still be used for storage of the student's work.

Statewide systems can be linked via microwave systems, or even the dedicated lines of a telephone network could be used. Most frequently, however, the link is accomplished through regular telephone lines and a modem. Satellites can also carry the signals from one computer to another.

Costs of establishing new systems is high, as is use of some already available networks. But innovations in the field promise to drop costs into the range of affordability for many schools. Software availability remains a problem.

TECHNOLOGIES IN CURRENT USE

Category A: Audio Teleconferencing -- Multi-point telephone transmission of voice only.

Supervised Correspondence Study (Nebraska)............Page 8
Telenet (Kansas).. 9
Teleconferencing (Wyoming).............................. 10
ETN Teleconferencing (North Dakota)..................... 11
Telecommunication Center (South Dakota)................. 12

Category B: Videotape Lessons -- Video playback of lesson material delivered on site.

Spanish Language Project (Missouri)..................... 13
SURGE, ERG (Colorado)................................... 14

Category C: Interactive Television -- Real time interactive television lessons with audio and/or video feedback.

Low Power Instructional TV (Minnesota).................. 15
Two-Way A-V via Cable (Illinois)........................ 16
Two-Way A-V via Microwave (Iowa)........................ 17
Accelerated Learning of Spanish (Utah).................. 18
TI-IN (Texas)... 19
Satellite System (Alaska)............................... 20

Category D: Interactive Video -- Interface between microcomputer and videodisc or tape player.

Legal Education (Nebraska).............................. 21
Writing Project (California)............................ 22

Category E: Computer Networks -- Linkage of microcomputers or terminals using a variety of carriers.

School Technology Project (Kentucky).................... 23
TEL-CATCH (New York).................................... 24
National Information Utilities (Maryland)............... 25
Electronic University (California)...................... 26
CADET (Alberta)... 27

PROJECT

TELE-LANGUAGE for High School Students
University of Nebraska-Lincoln

DESCRIPTION

Foreign language instruction delivered to rural high schools via locally supervised independent study with scheduled telephone conference calls between teacher and high school class.

IMPLICATIONS FOR RURAL SCHOOLS

UNL initiated this project in response to new foreign language requirements for high school accreditation. The project adds teleconferencing to already developed and tested independent study courses in Spanish, French, German and Latin. Courses in other areas, such as TELE-PHYSICS, are also being tested.

COSTS

Schools pay tuition of $48 per semester, plus a site fee of $300 per course per semester and a conference phone rental of $25 per semester. Books and handling fees total approximately $24 per semester. Program costs are estimated to total slightly more than half of the comparable costs to deliver a conventional course, assuming a foreign language teacher could be hired.

COMMENT

First year response to this program drew approximately 200 enrollments in 20 districts. Initial feedback indicates the curriculum is too rigorous for the delivery schedule, so adjustments are being made to accomodate student response. Every-other-week teleconferences are being replaced by every week calls, and the length of the calls is being left to the teacher's discretion, rather than a fixed time limit. UNL's program enrolls high school students nationwide, and this teleconferencing supplement may soon be offered in other states.

CONTACT PERSON

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Nebraska Center for Continuing Education
33rd and Holdrege Streets
University of Nebraska-Lincoln
Lincoln, NE 65853
(402) 472-1926

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PROJECT

Kansas Regents Continuing Education Network
TELENET

DESCRIPTION

Audio Conferencing system using four-wire dedicated telephone network and telebridge to link many widespread sites for various instructional programs. Recently added slow-scan TV for one-way visual transmission. Thirty-five network locations plus 23 available via telebridge.

IMPLICATIONS FOR RURAL SCHOOLS

Low cost system delivering interactive instruction to widely scattered students, with emphasis on two-way aspect of system. "This is for discussion, not lecture," says Kruh. Since their "non-prime" corresponds to public school day, good chance to rent existing system for comparatively modest expense. Daytime charges for long distance service may be higher, but possibilities for negotiation remain.

COSTS

Existing dedicated lines were acquired at fairly low cost in 1970, and telebridge purchased before recent price hike. Rental of system during non-prime hours helps defray expenses. Remainder of funding from student fees ($10-15 for printed materials), and membership fees from Regents institutions ($17,000 per school). Network can be leased for $120/hour plus $6.50/hour/site.

COMMENT

Strong faculty and student support for program. Mini-courses for honors students have attracted Alaska Department of Education, and 50 Alaskan students are joining in discussions with pre-eminent scientists from across the U.S. Regular or remedial courses could be offered in the same manner for curriculum enrichment.

CONTACT PERSON

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PROJECT

Wyoming Teleconferencing System
University of Wyoming

DESCRIPTION

Twenty-four port teleconferencing bridge installed in 1984 by the University of Wyoming and used in three college course offerings with videotapes and print components. Instructor hooks up to three sites and introduces the video lesson. After the video lesson is played locally at each site, the instructor returns to the audio net and conducts a seminar. University field reps monitor the local sites.

IMPLICATIONS FOR RURAL SCHOOLS

With its vast expanse, Wyoming constitutes a good field trial location for experimentation of this type. In the current offering, local sites are 200 to 350 miles away from Laramie. The project could be expanded into advanced placement credit or to the 36 high school correspondence courses now available through the University.

COSTS

Capital costs of $40,000 for the teleconferencing bridge include $27,000 for central equipment, rest for conference phones. State and local agencies pay $10 per hour per port for system use, plus line charges (about $10 per hour for 200 miles). High school tuition is $30 per 1/2 Carnegie Unit, plus books of $15 to $20.

COMMENT

The University may be ready to expand its use of the system and is interested in high school use. Since any of the 24 sites may be used for origination, local or regional resource sharing is possible. Enrollment so far is about 20 students per course.

CONTACT

Kenyon Griffin, Director of Extended Studies
University of Wyoming
Box 3302, University Station
Laramie, WY 82071
(307) 766-3152

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PROJECT

Educational Teleconferencing Network
North Dakota School of Medicine

DESCRIPTION

ETN is an audio teleconferencing network with dedicated lines into 50 sites, most of them medical facilities. The system is available from 8 a.m. to 5 p.m. Monday, Wednesday and Friday and from 8 a.m. to 9 p.m. Tuesday and Thursday. Sites are within 30 to 40 miles of any resident.

IMPLICATIONS FOR RURAL SCHOOLS

Schools close to one of the sites may be able to use the network, but convenience would be a major discouraging factor. Local coordinators serve each site.

COSTS

A line charge of $75 per hour buys access to all 50 sites.

COMMENT

Local sites once included many public libraries, but they were dropped for lack of use. Since the network is not fully used, perhaps North Dakota schools could investigate putting lines into rural schools interested in use of the system.

CONTACT

Karen Thoms, ETN Coordinator
(701) 777-3205

PROJECT

South Dakota State Telecommunication Center

DESCRIPTION

ATT Quorum Teleconference Bridge with 24 lines utilizes state telephone network, a mixture of TIE and WATS lines, to set up teleconferences for state supported groups.

IMPLICATIONS FOR RURAL SCHOOLS

Since their costs are very low for any state agency, support for a rural schools project by the State Department of Education would insure low cost two-way audio network for students in South Dakota.
They are not now using the state network or conferencing capabilities for instructional purposes, and since the bulk of the time is devoted to administrative functions, daytime space is limited. However, use of conglomerate telephone lines means that lines can be added as needed. No use of or interest in any visual capability at this time.

COSTS

Charges for conference calls include $5 to originate the conference call, and 12 cents per minute per site.

COMMENT

Medical Center uses Darome bridge and conferencing equipment.

CONTACT PERSON

Jim Stein
Room 125
Foss Building
State Capitol Complex
Pierre, SD
(605) 773-3121

PROJECT

Missouri Spanish Language Project

DESCRIPTION

A 30 half-hour video series in conversational Spanish, acquired from Miami-Dade Community College, has been meshed with a University of Missouri independent study high school course for delivery in two rural high school districts.

IMPLICATIONS FOR RURAL SCHOOLS

The two schools using these materials last year had quite different feelings about their experiences (one very positive, one negative), but both superintendents said they liked the model. Local supervision is an important element, as is rapid turnaround on students' papers from the distant teacher. Both those superintendents suggested a speaker phone hook-up would be helpful

COSTS

Tuition is $38 per student, plus books of about $40. Each school contributed $3000 to acquire the video series, added to an identical amount from the University of Missouri. The University believes additional schools could be added for about $2000, enough to buy lifetime rights and to pay for both video and audiotapes.

COMMENT

Good program materials must be combined with solid local supervision, which was lacking in first year's trial. Only one school is involved this year, but the program could expand throughout the state.

CONTACT

Roger Young
Director of Independent Study
University of Missouri-Columbia
(314) 882-6431

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PROJECT

SURGE, ERG
Colorado State University

DESCRIPTION

SURGE uses videotapes of "live" classes distributed across the state within two days of the class. Professors visit the remote sites to maintain contact with students, who can call with questions. (WATS lines available and most instructors have answering machines and return calls promptly.) Tapes are erased and reused. ERG courses are pre-produced in the studio, and do not involve a "candid classroom" setting. More reliance on inserted video material.

IMPLICATIONS FOR RURAL SCHOOLS

Videotapes of live classes limit production costs, and add topicality to material. Since many schools have playback equipment, and new videotape recorders/players have steadily decreased in cost, such a program may be within reach of most districts. Bicycling videotapes depends on reliable distribution system, which may present prolems in some areas during bad weather.

COSTS

Both programs are self-supporting. Major SURGE costs include student camera operators, equipment, maintenance/repair, materials purchase, and shipping. Tuition higher than for on-campus courses.

COMMENT

Users of this system are very positive about the cost-effective way in which they can provide courses to students unable to come to campus because of work or travel limitations. Both SURGE and ERG students have high completion rates (as would be expected of professionals) and high achievement in courses.

CONTACT PERSON

Marcia Barkirer, Director
SURGE
Division of Continuing Studies
Colorado State University
Fort Collins, CO 80523
(303) 491-5203 or 5288

PROJECT

Two-Way Audio-Visual Instruction via Low Power TV
Eagle Bend High School, Minnesota

DESCRIPTION

Two-way audio-visual simultaneous connection among five rural high schools via low-power television. Teacher at any of the schools can relate to students at any or all of the other sites. Teachers, who volunteer for TV assignment, get in-service training.

IMPLICATIONS FOR RURAL SCHOOLS

Program initiated to expand foreign language programming in rural schools; now includes language, advanced math, English composition, arts, business shorthand, career education. With nearly five years experience, the project has considerable experience, but cost is a major problem.

COSTS

Total investment is estimated at $500,000, although cost of equipment has dropped considerably in five years. Operating costs per student last year were $600, and an average of 18 students were enrolled in each course. The program has had considerable grant support.

COMMENT

A model program with apparent high degree of academic success, but very high capital costs. Future expansion of the system is being considered. The project includes service to five schools and a new mode of transmission (fibre optics) could provide an opportunity for two other sites. The possibility of expanded community use is there and could prove beneficial.

CONTACT

Russ Martinson, Superintendent
Eagle Bend High School
Box 299
Eagle Bend, MN 56446
(218) 738-6442

PROJECT

Carroll Instructional Television Consortium
Illinois

DESCRIPTION

Simultaneous two-way video and audio communication on cable TV. Four schools in NW Illinois connected with cable network.

IMPLICATIONS FOR RURAL SCHOOLS

A good example of sharing resources for a common goal. Small schools can pool students in television classrooms to make instruction cost-effective. Equipment costs are substantially less then salary expenses for each school to pay a teacher for the ten years projected equipment life.

COSTS

Each school district responsible for its share of the expenses of teachers' salaries. One-time equipment costs including cameras, receivers, extra cable, etc., was $18,745. Cable rental guaranteed at $1600 per year for the first five years.

COMMENT

Faculty fears of controlling remote students and concern that the public could watch their classes were laid to rest. Cooperation among participating schools and teachers in like disciplines, adult education possibilities, and educational advantages of student use of equipment have been "exra benefits."

CONTACT PERSON

Joel McFadden
Superintendent of Schools
Lanark, IL
(815) 493-6301

PROJECT

Two Way Instructional Television (TWIT)
Morning Sun, IA

DESCRIPTION

Four Iowa schools are linked through microwave to an interactive television system. Each school has a tower and dish, and one classroom equipped with a color camera, a live microphone, two viewing monitors for the students, and a console television for the instructor to view the other classes.

IMPLICATIONS FOR RURAL SCHOOLS

The TWIT system was developed to provide course offerings in schools that did not have enough students to justify the expense of full-time staff for advanced or specialized courses. Offerings at this time include psychology, sociology, pre-calculus, and four levels of Spanish. Enrollment figures range from 15 to 18 in beginning level courses to a maximum of 10 students in advanced courses. Microwave allows two-way communication for less money than some other systems, but requires relatively short distances of under 30 miles to operate effectively.

COSTS

Funding came from a $200,000 Title IV ESEA grant. Costs vary with the terrain and microwave capabilities, but Telecom Engineering estimates the costs per school will vary from $25,000 to $60,000. Maintenance costs are minimal, and the life of the equipment is usually figurerd at ten years.

COMMENT

Participants are enthusiastic about TWIT, and have found it a good solution to their similar problems. Cooperation is essential, and the four schools even run on an identical schedule to facilitate scheduling TWIT students and instructors. Interest remains in adding a computer link, which would utilize a special modem to allow communication even while class is being taught, although no time line has been set.

CONTACT PERSON

Francis R. Davis
Superintendent of Schools
Morning Sun Community Schools
Morning Sun, IA 52640
(319) 868-7701

PROJECT

Accelerated Learning of Spanish by Satellite
Utah Department of Education

DESCRIPTION

Highly intensive, accelerated Spanish language program for junior and senior high students. Uses daily live satellite broadcasts, plus supervised on-site review and computer networking, with voice synthesizers. Twenty-nine schools enroll 800 students in the course.

IMPLICATIONS FOR RURAL SCHOOLS

Though still experimental, this project has attracted user school districts in Utah, Colorado, Nevada and Arkansas and demonstrates the outreach capability of a highly ambitious and costly combination of technologies. The project will probably undertake a nontraditional language, such as Japanese, as the next activity.

COST

Cost estimated at $1100 per class of 20 students. As classes are added at one site, the average per class cost drops considerably. All hardware extra.

COMMENT

As with many others, this project got off the ground with grant support, including $450,000 in equipment donated by IBM and underwriting from the Bonneville Corp. Total cost for start-up: $1.5 million. Though development has been rushed, student evaluations indicate good performance on standardized tests.

CONTACT PERSONS

Ken Neal, Project Director
Coordinator of Information Technologies
Utah Department of Education
(801) 533-5573

Christine Olson, Curriculum Director
Utah Department of Education
(801) 533-6040

PROJECT

TI-IN
Texas Satellite Project

DESCRIPTION

Two-channel full-time privately operated satellite distribution system delivering courses for high school juniors and seniors, plus in-service for teachers. Classes taught live by teachers for 55 minute periods, as required by Texas law, to 77 schools in Texas, plus schools in Arkansas and California.

IMPLICATIONS FOR RURAL SCHOOLS

This is another in a new crop of satellite distribution systems aimed at smaller schools but with a new twist: the distribution system is owned and operated by a private, for-profit corporation. Its existence indicates that the long-range cost-effectiveness of large systems may be defensible, and it supports the value of delivery systems combining student learning with staff development.

COSTS

Operating costs are calculated at $240 per student per semester hour. Districts pay $2000 to gain access to in-service programs for the entire year. Courses labeled student enrichment are delivered free, as are other in-service programs, for school board members and other school employees.

COMMENT

Systems such as this one deserve watching because of the historic inability of for-profit organizations to sustain success in this market. If local schools find the cost of these systems attractive, and if the courses offered resolve local problems, then there is no reason that schools outside Texas should not take advantage of them.

CONTACT PERSON

Pat Tinsley, President
TI-IN
100 East Nasas Road 1, Suite 201
Webster, TX 77598
(713) 554-5545

PROJECT

learn/Alaska

DESCRIPTION

Satellite system, one channel on SATCOM II, with four uplink stations. Dishes all over Alaska receive the signal and transmit the 18 hours of programming each day to local systems.

IMPLICATIONS FOR RURAL SCHOOLS

The system serves a total population of 500,000 in an area as large as Western Europe. Half are urban; half live in 200 small communities scattered throughout the state. They relied on programming purchased from the "lower 48" for the first year, but now they are trying to produce programming tailored to the state's special needs. Programs can originate from any of the four up-links, at Fairbanks, Juneau, Anchorage, and Kotzebue.

Audio conferencing through bridging equipment at Anchorage can connect up to 80 lines, and is used for committee work, including dialing in participants from as far away as Raleigh, NC.

COSTS

Funded by a $500,000 endowment from the state legislature in 1980, the system is run jointly by the Alaska Department of Education and the University of Alaska Instructional Telecommunications Consortium (UAITC).

COMMENT

learn/Alaska represents a single solution to the same problem in a roughly comparable area. Individualization could be enhanced by taping off the air for reinforcement or remediation. Alaska covers five time zones, so some problems are even greater than those in the Midwest.

CONTACT PERSON

Don Rinker
Director of Telecommunications
Northwest Arctic School District
Kotzebue, AK

Tom van Brocklin
Media Coordinator
Prince William Community College
Valdez, AK

PROJECT

Interactive Videodisc for Legal Education

DESCRIPTION

Interactive, highly branched computer managed videodisc showing trial techniques, used as a transition device between sequential courses in basic evidence and trial advocacy. Uses two-screen system: one for disc displaying courtroom scenario and action, and one for computer with text and prompts.

IMPLICATIONS FOR RURAL SCHOOLS

Interactive system using self-contained and self-paced computer managed and assisted instruction. Technology prices are coming down to a point of real affordability for smaller schools ($1500 per station according to Nebr. Videodisc Production Group). Disc replication costs are becoming attractive, considering life of each disc. Changes are easily made in program, so outdated portions of video on disc can be skipped.

COSTS

$80,000 grant for development of disc let two people work part time during the school year, and long hours during the summer. Hardware cost totaled $12,000, but are lower now. They are now reprogramming to use the IBM-PC or Sony 2000. making costs more in $4000 per station range. A Law School already owning micros could have the system for under $2000.

COMMENT

Lack of standardization in videodisc technology means limited courseware is now available. One big push could tip a project into standardization by default. Courseware developed by teachers or schools for standardized system could be profitable for developers. Disc production cost brings price into $300 range, so cost per use gets lower.

CONTACT PERSON

Roger Kirst
212 Law
University of Nebraska-Lincoln
Lincoln, Nebraska 68508
(402) 472-1249

PROJECT

Paragraph Principles
Indian Valley Colleges
Norato, California

DESCRIPTION

An interactive videotape course in writing paragraphs, developed by staff and produced by an instructor in TV production, with aid from work-study students.

IMPLICATIONS FOR RURAL SCHOOLS

Technology of interactive videotape production is fairly inexpensive compared to other technologies. Uses Apple II+ micro for CAI, teaching principles of writing, with visual presentation of a variety of examples. The applications portion, during which students write paragraphs for instructor critique, occupies second four weeks of the course.

Editing was done with two Sony 2860 recorders and a Convergence ECS-90 editing controller. Production facilities were available at Indian Valley Colleges.

COSTS

A "small grant" paid for film, tape and some of the time spent on the project, so the budget was limited. Videotape players and computers to manage the interactive system would be the major hardware expenses.

COMMENT

Recording ability of videotape over videodisc suggests an advantage for videotape technology. "Homegrown" courseware can be both application-specific and economical for sharing.

CONTACT PERSON

Helayne Waldman
Department of Secondary Education/Educational Technology
San Francisco State University
1600 Holloway Avenue
San Francisco, CA 94132
(415) 469-1201

PROJECT

Kentucky Schools Technology Project

DESCRIPTION

Interactive computer network linked by existing statewide microwave system. Multi-drop from microwave with 600 voice-grade circuts. Centralized computer using hardware and software developed by Computer Curriculum Corporation (CCC) of Palo Alto, CA (800 227-8324). Project aimed at middle school students, including remedial. In 1984-85, 1,782 students were enrolled in 21 schools.

IMPLICATIONS FOR RURAL SCHOOLS

Software includes math, reading, and is highly branched and diagnostic. Ten minutes per student per day seems effective. May add computer interactive videotape. Kentucky system could be replicated with dedicated lines. (Seventeen South Carolina schools are linked with modems.) Also has "Dial-a-Drill" for homework or practice from terminal outside of school.

COSTS

Since microwave system was already in place, costs are not available for that portion of project. "We'll pay for the multi-plex in a couple of years," according to Anderson.

On-line all the time, so computer costs fairly high. One system consisting of computer with 64 terminals will be in the $200,000 range, and includes all hardware and perpetual liscense for software. Most efficient operating cost: $2.35; $23.90 for one year gain in basic skills.

COMMENT

"Software is powerful, not pretty," says Anderson. CCC has gotten "good reviews" from schools using the system.

Comparative effectiveness of using terminals vs. micros is presently being evaluated with 1300 students on the two systems.

CONTACT PERSON

Charles M. Anderson
Western Kentucky University
(502) 745-2153

PROJECT

TEL-CATCH
United Cerebral Palsey Association of Western New York

DESCRIPTION

Interactive television utilizing computer-generated material. Modem connects user's keyboard to central computer which manages both learning and the six sideband or superband channels carried on local cable systems. Interactive system of video and computer is available 24 hours a day, 7 days a week.

IMPLICATIONS FOR RURAL SCHOOLS

Interactive computer-managed instruction (CMI) available with technology already in place, ie, cable. Originally intended for home-bound handicapped, now used by pre-schoolers to senior citizens and non-handicapped.

COSTS

Would depend on franchise agreement negotiated by local cable licensees. Six channels may not be possible on existing systems. Dependence on mainframe computer to manage system also boosts costs.

COMMENT

Includes GED material, so service to adult learners at same level has been implemented. Initial instruction for each user is by a visiting teacher.

CONTACT PERSON

Molly Richardson
Director of Interactive Television
United Cerebral Palsey Association of Western New York
Williamsville, New York

PROJECT

National Information Utilities (NIU) Corp.

DESCRIPTION

Satellilte linked computer network designed to provide varied informational services and programming to member schools. Uses FM sideband to deliver information, and has a very sophisticated verification procedure which helps insure accuracy of information transmitted.

IMPLICATIONS FOR RURAL SCHOOLS

Maryland is the testing ground for the system at this time. If the project is successful, the state wants to eqiup 100 schools with the technology by the end of 1985. Computer networking of some variety may prove to be a very cost-effective way of sharing information, particularly in schools interested in CAI.

COSTS

Originator Jack R. Taub estimates that it would cost local school systems about $750 per student desk to buy the computer hardware and to pay for teacher training. Use of the data bank would cost about 50 cents an hour. Use of subcarrier channels, which are buried within broadcast channels, is a less expensive alternative to using telephone lines.

The state of Virginia has applied for a $186,752 grant to test the technology in an application for more than 2000 special education home-bound students.

COMMENT

Costs are likely to be high unless an inexpensive delivery system can be found. Access to satellite transmissions should not be a problem. It's probably too soon to draw conclusions about how potential effectiveness.

CONTACT PERSON

Jack R. Taub
National Information Utilities Corporation
8150 Leesburg Pike
Vienna, VA 22180
(703) 734-7000

PROJECT

TeleLearning's Electronic University Network

DESCRIPTION

A commercial telecommunications service providing easy-to-use electronic mail connection between student and teacher. Requires student and teacher each to have access to microcomputer and modem. Software initiates phone calls to nearest packet switching node; hook-up and transmissions handled automatically.

IMPLICATIONS FOR RURAL SCHOOLS

Provides turnkey operation for instructional users with access to IBM, Apple and Commodore computers. Students could communicate with teachers anywhere in the United States. Most rural schools would have to pay a telephone toll charge to get from school site to the nearest node.

COSTS

Student enrollment package (with modem) runs $170 to $230 retail; instructor package (without modem) is $200. School pays $15 per enrollment for system use plus communications costs averaging $1.50 per student-teacher interaction.

COMMENT

First high school course use of the system scheduled for January 1985 through the University of Nebraska-Lincoln Independent Study High School.

CONTACT

Ron Gordon, Chairman
TeleLearning Systems Inc.
505 Beach Street
San Francisco, CA
(415) 928-2800

PROJECT

CADET
Computer Assisted Distance Education Telecommunication

DESCRIPTION

Computer networking allowing multiple-user access, including downloading, back-up, monitoring, packet switching for secure transmission, adapting mainframe to different micros, and providing larger memory capacity.

Using micros as self-contained units with access to mainframe minimizes use of the mainframe, cutting connect costs, since telephone lines are used.

IMPLICATIONS FOR RURAL SCHOOLS

Reducing on-line charges and telephone bills makes linking with mainframe computers possible from greater distances and in greater numbers. Software includes protocol communiction program such as Visiterm (VisiCorp, Inc.) and a text editor such as Magic Window (Artsi, Inc.), plus a modem to "call" the mainframe.

Cost-effective way of transmitting programs to distant centers from central control site or school. Both CAI and CMI capabilities present.

COSTS

Costs include any micros not already in place, a mainframe with time enough to deal with access demands of member schools, and fairly minimal connect charges and telephone line charges. May be an inexpensive alternative to installing an entire system.

COMMENT

There may be some limits to compatability of equipment now owned by target schools. Need additional information on any limitations, and how to adapt to them.

CONTACT PERSON

Joseph Kirman and Jack Goldberg
University of Alberta
Edmonton, Alberta CANADA

DELIVERY SYSTEMS BY STATE

	PUBLIC TELEVISION	PUBLIC RADIO	TELEPHONE NETWORK	CABLE TELEVISION
COLORADO	3 Stations Broomfield, Denver Pueblo	3 Stations All FM 30-70 mi. range	Two national firms headquartered in Colorado	105 systems serve 203 communities--348,945 subscribers, 281,912 pay units
KANSAS	3 Stations Bunker Hill, Topeka, Wichita	5 Stations 4 FM (40-100 mi. range) 1 AM (250 mi. range)	TELENET Dedicated lines with bridge, statewide	211 systems serve 278 communities 441,271 subscribers, 250,681 pay units
MISSOURI	4 Stations Kansas City, Springfield, St. Louis, Warrensburg	9 Stations All FM 28-100 mi. range	Operated by Ag Extension	185 systems serve 396 communities--520,239 subscribers, 480,943 pay units*
NEBRASKA	2 Originating stations, 9 transmitters on KUON's statewide network	3 Stations All FM (50-75 mi. range) 1 Lincoln, 2 Omaha	UNCEAN Dedicated lines link 9 sites, others by bridge	104 systems serve 140 communities--260,523 subscribers, 224,265 pay units
NORTH DAKOTA	6 Stations linked in statewide network	4 Stations 3 FM (45-90 mi. range) 1 AM (75 mi. range)	ETN, School of Medicine Dedicated lines to 50 sites	106 systems serve 119 communities--114,619 subscribers, 23,194 pay units
SOUTH DAKOTA	7 Stations linked in network covering most of state	3 Stations 1 FM (not yet qualified) 2 AM (35-150 mi. range)	State Telephone Network Bridge to set up conference calls	77 systems serve 92 communities 89,143 subscribers, 36,470 pay units
WYOMING	1 Station Riverton	1 FM Station Laramie (100 mi. range)	REDI-NET Telephone Conferencing System, with bridge	48 systems serve 88 communities--112,348 subscribers, 66,018 pay units

* 58 cable franchises are not operating at this time, or are not yet operating.

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SUMMARY

Rural school policy makers have access to an increasing variety of technologies to expand high school curricula through cooperative arrangements with other high schools, colleges and universities, and state departments of education.

Fortunately, a growing number of models exist which demonstrate how various technologies are being used -- right now -- by school districts facing such challenges. Since the models run the gamut from low-cost, readily available technologies through high-cost, high-risk delivery systems, their existence constitutes a valuable starting place for any school district interested in surveying current practice for possible adaptation to its local environment.

Fortunately, many such models exist within the McREL region or in other states in the Midwest and Great Plains, so examples from which rural high schools might learn are not far away.

Rural school districts interested in applying technological means to solving current educational problems need to keep in mind, however, these three cautions:

> First, the most exotic technologies are not necessarily the most practical for immediate use.
>
> Second, resource sharing is essential.
>
> Third, the major roadblocks are usually political, not technological.

Appeal vs. Practicality

Educators naturally are attracted to such appealing technologies as videodisc-microcomputer interfaces and satellite conferencing. The videodisc, especially, interests educators because it represents the cutting edge of educational technologies and a meshing of video, programmed instruction and text. The potential instructional power is obvious.

Unfortunately, perhaps, the most exotic technologies are not necessarily those most in reach of rural schools. What technologies are most readily available? They tend to be the technologies that are older, most affordable, and easiest to implement:

* audio and video lessons played back in the local school

* telephone conferencing systems or networks

* independent study by correspondence, combined with local supervision and perhaps on-site visits by the instructor

* some combination of these delivery systems

There are, however, a growing number of examples of rural school districts linking their high schools through interactive TV systems (ITFS, cable, or microwave). Some systems offer two-way audio and video transmissions, with TV classroom equipment that is becoming affordable for most districts. The distribution system itself, however, can be quite expensive, though consortia may find the cost per district -- amortized over several years -- a defensible expenditure when compared with the costs of highly labor- and/or travel-extensive strategies.

Resource Sharing

Resource sharing among districts and with other educational agencies is also becoming more common, as the growing number of examples illustrates.

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There is little, if any, argument that resource sharing is an essential element to successful use of delivery systems available to rural schools. The opportunities extend throughout states and, with advancing technologies, even across state boundaries.

A simple example is the independent study program offered by a college or university. Within the McREL region, several state universities offer high school and college independent study courses for enrollment by college students. Two of the nation's largest high school independent study programs are located within the region, and both of them are using technologies to expand their outreach capability and to increase effectiveness of their programs.

Schools interested in use of certain technologies -- interactive television is the premier example -- will have to employ resource sharing to make affordable their access to distribution equipment. And they will need to share teachers and other resource persons to protect themselves from investing new resources in technologies and then also expending district funds for more personnel. A good science teacher can, through technology, teach science courses in several high schools without the time or expense of travel.

State departments of education and colleges and universities often are the managers of instructional televison systems, audio teleconferencing bridges and computer networks -- all offering means to enable resource sharing. Those institutions themselves may be interesting in joining in a cooperative approach to benefit themselves as well as the local districts involved.

In any resource sharing arrangement, however, it is important to establish a structure which:

* clarifies roles and expectations of the partnership as a whole and of each of the partners individually.
* establishes an ongoing communications mechanism which forces the partners to share information regularly.
* provides for periodic evaluation and assessment -- even if relatively informal -- to make sure that effectiveness is assessed and that alterations based on common data are acceptable.

Barriers to Change

Finally, it is important to remember that most of the barriers to change will be political and not technological.

Questions about what technologies might be employed, how they might be employed, and at what cost are questions that can be answered by the technicl experts. The policy makers will have to deal with such questions as:

* who pays how much
* who leads and who follows
* who offers what courses and when
* who is in charge and who is not

Fortunately, there are also growing numbers of examples indicating that these kinds of questions also can be answered satisfactorily. Many of the model projects thrive because of the willingness of partners to agree on the political issues as well as the technological ones.

An Update

In the year since the first issue of this report was prepared, a number of new projects have emerged that demonstrate the exciting potential for significant advancement in uses of technologies when large numbers of school districts are involved. Those projects -- and many others reported here and in other similar documents -- suggest that we may be headed toward a period of renewed development of technological potential on a large scale.

There is also something to be said for projects planned on a smaller scale, where upfront commitments are counted in cooperation more than currency. Clearly, changes in practice can be made in both large and small projects. Where rural schools are involved, the smaller projects may do as well in the long run.

If there were some rules for implementation of new technologies, they would surely encompass a number of principles borrowed from the pages of entrepreneurial success stories. Successful entrepreneurial organizations, for example, learn quickly to:

a. Generate and screen new ideas
b. Develop and test new concepts
c. Analyze new opportunities
d. Implement innovations successfully

Successful innovators protect their risks -- and the risks of their stockholders or constituents -- by planning innovations that promise:

a. big potential impact
b. small cost for implementation
c. short time for completion
d. high visibility if successful

Small organizations, especially, often have a better chance of adapting to changes. Organizations led by professional managers also enjoy more flexibility in response to environmental change and often are key to establishing readiness to realign strategies in line with new opportunities.

Any organization will succeed in making major changes if it positions itself for success with these additional measures:

* Make an institutional commitment, from the policy level throughout the management team, and decide what expectations will accompany that commitment.

* Get the natural leaders involved, early and ambitiously, so that their affiliation will establish a model for others.

* Move from established organizational expertise and strength, rather than trying to develop new expertise essential to the change strategy.

* Don't engage in multiple innovations -- innovate a step at a time, rather than trying to transform the organization into something entire different overnight.

* Anticipate some failure, and be prepared to overcome it, rather than letting it overcome you.

APPENDIX C.

Evaluation Summary: Conference on Higher Order Thinking Skills

EVALUATION SUMMARY
URBAN EDUCATION TRI-NETWORK MEETING
ST. PAUL, MINNESOTA
MAY 19 - 21, 1985

Participants were asked to rate the quality and usefulness of the following general aspects of the meeting and the following specific meeting sessions on a 1 to 5 scale (5 = Excellent; 1 = Poor). A summary of the responses (N = 18) follows.

Overall Organization	4.83
Presentations	4.50
Facilities	4.89
Information Sharing/Networking	4.11
Overview of Laboratory Programs	3.81
Network Member Updates	3.81
"Higher Order Thinking Skills for Retarded and Low Achieving Performers" (Feuerstein)	4.71
"Fun With Science Magic" (McCarthy)	4.67
"Issues in the Teaching of Thinking" (Brandt)	4.82
"Conditions in the Classroom That Will Encourage Higher Order Thinking" (Costa)	4.94
"Reading and Thinking in the Content Areas" (Estes)	3.94
"California's Assessment of the Critical Thinking Skills in History and Social Science" (Kneedler)	3.65
"School and State Applications of Higher Order Thinking Skills" (Randall, Bennett, Luckey)	3.53
"What's New in St. Paul Public Schools?" (McGuire)	3.87
"Technology and Higher Order Thinking Skills" (Valdez)	3.93
Network Business Meeting	4.29

COMMENTS:

The facilities were superior!

(Estes) was evangelistic. A preacher and performer. Not my cup of tea!

Overall, one of our best shows.

The conference was extremely well organized. The presentations on higher order thinking skills were excellent and on-target for addressing a high priority need of urban schools. The Tri-Network concept worked exceedingly well. I am enthusiastically optimistic that the urban education network will continue to serve as an important force for our respective institutions in improving the quality of learning in urban schools.

Network Member Updates:
- More! More!
- Need more time.
- Too hurried.
- We did not hear all of them. We need more time for this activity.

Information on thinking skills was timely and well-done by presenters overshadowing other good portions of the program--as well as usual "networking" that takes place at our meetings. Overall--our best meeting in years, excluding Snowmass.

Not enough time available for information sharing/networking.

It was a terrific, useful, interesting meeting. Well planned and organized. I missed the opportunity to get together in small interest groups for interactive discussion of some common interests or problems.

Overall--a very good meeting. Thanks for making it possible.

Good conference!

APPENDIX D.

Survey of State Leadership Groups

Information Requests:

Respondant's Name:____

Position:____

Assessment of Past Activities:

Do the types of activities described on the briefing sheets appear to be appropriate to the past educational needs in the State?

Were any of them inappropriate or off-target with State needs?

Over the past five years were there other major educational needs in the State that a research and development organization like McREL should have been involved with but wasn't?

Future Needs:

What are the major needs for education in the North Dakota over the next 3-5 years?

1. Curriculum:

2. Teaching:

3. Administration:

4. Governance:

5. Finance:

6. Accreditation/Certification:

7. Other:

Which of the needs identified above would appropriately call for the involvement of a Regional Laboratory whose major focus is on the creation and use of knowledge related to school improvement and whose activities include: research, development, dissemination, training, and technical assistance?

If you could select only one or two things for McREL to focus on, what would they be?

[illegible]
[illegible]
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This is how McREL has served . . .

COLORADO

- In cooperation with the Colorado Education Association, McREL developed an innovative approach to meeting the inservice needs of teachers in remote, rural areas. It combined a programmed course of instruction managed by a trained local teacher with a teleconferencing system that couples each instructional site to a professor at a state university. McREL has entered into a formal understanding with Colorado State University to authorize them to expand and continue the program.

- McREL conducted a study of the causes of attrition among female Hispanic students at a state university. The study revealed that greater attachments to home and less peer support contribute to attrition.

- McREL assisted Colorado State University in establishing a National Center on Rural Education; as part of that effort McREL has contributed to the publication of a series of journals intended for people interested in rural education.

- McREL secured funding for Colorado's Cotopaxi and Westcliffe school districts to implement a program to make effective instructional use of the four-day week. In addition, McREL staff have served as the evaluators for this project for the past three years. This included systematic collection of obsrvation data and data analysis. This was one of four National Sites participating in the Follow-Through Research Project.

- McREL worked with the University of Colorado's Bilingual Education and Service Center to implement a three-year program for qualifying children of migrant and seasonal farm workers to complete a high school equivalency program.

- McREL provided Denver Public Schools with training for teachers to deal with expectations toward culturally different students. Also, McREL provided assistance to the DPS Task Force for Desegregation.

- Helped Mapleton collect data about their schools (SSI) from parents, students, teachers, administrators and staff. We consulted about data collection, completed the data analysis and helped tabulate results.

- Conducted program evaluation of the South Platte BOCES.

- Technical assistance to Colorado BOCES.

- Masters Seminars for NEA.

- Technical and Leadership Workshop, Woodland Park.

- Training for State Board and Vocational Education personnel.

- Technical Assistance to the Chicano Researchers Association.

- Co-sponsors annual Rural Education Conference at CSU and works with National Office, Rural Education Association.

- Workshop at Mountain Bell, in Adopt-A-School Project.

- Organized Colorado Alliance, large school districts BOCES, included university people, state department and rural network.

- Three Colorado Districts are users of CSMP.

- Worked with staff of the Mountain View Education Center at the University of Colorado to develop an alternative science curriculum for rural high schools.

McREL has also conducted . . .

- Effective Schools Program (ESP) state policy meeting with 25 national researchers, Denver.
- Overview for Community Involvement Inservice Day for 400, including public school staff, administrators and school board members, Frisco.
- Presentation to 100 participants of the Colorado Association of Vocational Administrators, Colorado Springs.
- Strategic Planning meeting with 300 community members including administration, staff, and school board members of the Englewood Public Schools.
- Strategic Planning with 50 administrators and the Planning Committee Members, Wheat Ridge.
- Inquiry approach Planning with 10 administrators, Leadville.
- Helped organize and support a Science Curriculum Development cluster involving 6 schools, CSU and the N.E. Colorado BOCES.
- Masters Seminars in models of Teaching and the Change Process for 32 teachers in Mapleton.
- Summer Institutes at Vail, Estes Park, Snowmass.
- Leadership and change characteristics for Fort Morgan BOCES administrators.
- Workshops and training in Cherry Creek, Durango, and Mapleton on Higher Order Thinking Skills.
- Computer Fair for 5,000, Mapleton.
- Sponsored Language Research for students, University of Colorado.
- Presentation to Colorado Adult Continuing Education Council.
- Workshop for Colorado School Boards on Strategic Planning.
- Developed Model for the Title II Basic Skills Project and trained 20 school staff.
- Effective School Program training for Department of Public Instruction.
- Workshop on Equity Issues for administrative staff in Boulder Valley.

KANSAS

Briefing Information:

The Mid-continent Regional Educational Laboratory (McREL) serves seven mid-western and Rocky Mountain States (CO, KS, MO, NE, ND, SD, WY). McREL's primary funding agent is the National Institute of Education, part of the Department of Education. Our central focus is school improvement with services to state education agencies, local school districts, professional organizations, and institutions of higher education. McREL's activities include: research, development, dissemination, training and technical assistance.

Activities of the Mid-continent Regional Educational Laboratory in Kansas over the past five years include these:

Rural Education

McREL co-sponsors with the Kansas State University Center for Rural and Small Schools, an annual rural education conference which is held at KSU.

McREL has helped form and facilitate a small school cluster involving Kansas State University and 8 school districts. Cluster activities include leadership training for administrators on teacher evaluation, the formation of a consortium for staff development on micro-computers and using the resources of the small school for rural community development. Two additional clusters involving the Kansas State Department of Education are in the development stage.

As a way of broadening the knowledge base of rural education, McREL is supporting Kansas State University in conducting a small follow-up study of rural school graduates to determine the quality of the products resulting from small high schools.

School Improvement

The history of the development of McREL's Effective Schools Program is strongly linked to the state of Kansas. McREL conducted a study of school practices in three states (South Dakota, Wyoming and Kansas) which indicated that classroom management of time-for-learning varies considerably from classroom to classroom. The study led McREL to develop a broad "school improvement program" (now titled Effective Schools Program). The program helps increase student achievement by increasing the percentage of time students are successfully engaged in learning.

The Effective Schools Program has been provided to several school districts in Kansas; and staff have presented information about the program in numerous other districts. Specific school improvement activities include: 1) workshops conducted for teachers and administrators in Spring Hill, Emporia, Nickerson, Independence, Olathe, Piper, Tonganoxie, and Burlington Schools; 2) strategic planning sessions for school improvement have been conducted for superintendents, principals and teachers in Lindsborg, Hutchinson, Wichita/Salina, and Leavenworth schools and for the State Board of Education; 3) school improvement programs were conducted in 24 Wichita Public Schools and other districts; 4) the effective schools research results were presented to a Principal's Academy at Pittsburg State College; and, 5) the School of Education faculty at Emporia State College are observing the Effective Schools Program as it is being conducted in Emporia School District (the purpose is to adapt the program to be incorporated into their pre-service teacher training program).

Evaluation of the program by participants was very positive. McREL also conducted a study of reasons for teachers leaving the teaching profession. Results indicated that negative school climate and poor discipline are as contributory to "teacher flight" as poor salaries. This finding has been incorporated into the school improvement program by adding a focus on administrative leadership and support to teachers.

State Policy Activities Conducted With or For the Kansas Department of Education:

In Kansas, McREL was part of a collaborative effort (with the SDE, PTA, School Board, and professional associations) to provide the annual Education Week Conferences, dealing with the use of research to improve schools.

Two workshops on micro-computers were co-sponsored by the Kansas State Department of Education and McREL.

Several strategic planning activities have been conducted. McREL has worked with the State Education Agency to develop a state-wide strategic School Improvement Plan. In cooperation with the Governor's Office, the State Department of Education and community colleges, McREL has conducted state-wide strategic planning for more than 2,000 teachers, superintendents and principals.

McREL also assisted the State Department of Education in the conduct of a special Chapter 1 study.

Other Relevant Information:

Several Kansas individuals have been supported by McREL's regional internship program.

Kansas is represented on McREL's governing board by Dr. Merle R. Bolton, Dr. Edward D. Greenwood and Dr. Al Morris.

McREL has worked with several Kansas institutions of higher education to prepare and submit Title III proposals: Fort Scott Community College, Pratt Community College, Cloud Community College, Labette Community College, and Mid-America Nazarene College.

McREL staff has assisted the University of Kansas in a state-wide "Dean's" grant project to inform faculty of smaller, private teacher training institutions of competencies necessary for teachers to educate handicapped children in regular classroom settings.

Regional Forums to update educators on research and development were conducted for three years in four locations each year.

McREL also supported state-wide technical initiatives in education.

Relevant Information From Other States:

McREL conducts similar work to that described above in its six other states. Selected projects from these other states that might be of interest in Kansas include:

- The development of local and state agencies, including school boards, in strategic planning processes that examine the needs for improvements geared to the changing society.
- The state-wide implementation of the Effective Schools Program through regional service agencies.
- A policy examination of the viability of regional service agencies.
- A staff development program dealing with "mainstreaming."
- Technical assistance to study groups and commissions responding to the National Commission Report.

MISSOURI

Briefing Information:

The Mid-continent Regional Educational Laboratory (McREL) serves seven mid-western and Rocky Mountain States (CO, KS, MO, NE, ND, SD, WY). McREL's primary funding agent is the National Institute of Education, part of the Department of Education. Our central focus is school improvement with service to state education agencies, local school districts, professional organizations, and institutions of higher education. McREL's activities include: research, development, dissemination, training and technical assistance.

Activities of the Mid-continent Regional Educational Laboratory in Missouri over the past five years include these:

Rural Education

McREL assisted in the creation and facilitation of three micro-computer consortia involving 17 districts, the University of Missouri, and the Missouri Department of Elementary and Secondary Education. Over 700 teachers and 125 state agency staff have received training on the micro-computer. A computer writing project involving 30 teachers from six schools was conducted by the University of Missouri to enhance the teaching of written composition in small schools.

McREL has provided the Missouri Department of Elementary and Secondary Education with ongoing consultant help to explore ways in which the micro-computer can facilitate routine data collection and analysis. McREL has assisted the University of Missouri in conducting a pilot project in the offering of foreign language via electronic technology where teachers are not available on-site. This activity resulted from a long-range planning activity conducted with four school districts in cooperation with the University of Missouri.

School Improvement

In Missouri, approximately 15,000 parents and educators were trained in McREL's "parents-involved-in-learning" program. The program focused on parental participation in academic activities rather than school governance. This program has been adapted for use on an Indian reservation in North Dakota.

There has been extensive school improvement involvement in the Kansas City School District. McREL's Teacher Corps program addressed specific inservice needs of teachers and principals in the Kansas City School District. Approximately 200 educators in the Kansas City School District were trained in the Effective Schools Program. McREL assisted the Kansas City district staff to implement long range planning for the improvement of student achievement.

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State Policy Activities Conducted With or For the Missouri Department of Elementary and Secondary Education:

McREL has worked with the Missouri State Department of Education to develop and provide training for principals and teachers in eight districts to improve basic skills achievement in Missouri schools.

McREL conducted staff training of regional supervisors for the Missouri State Department of Elementary and Secondary Education in early childhood literature.

McREL staff is assisting the Missouri State Department in an ongoing staff development program for the ten area superintendents on developing quality criteria that can be incorporated in the school classification procedures.

Other Relevant Information:

Several Missouri individuals have been supported by McREL's regional internship program.

Missouri is represented on McREL's governing board by Dr. James R. Oglesby and Dr. Robert C. Shaw.

McREL has been involved with several higher education projects in Missouri. Assistance was provided to Avila College, Kansas City, Missouri, in the design of an assessment and evaluation program for their basic skills and career center under Title III, Higher Education. McREL assisted Tarkio College, Tarkio, Missouri, in implementing their second-year activities in a title III Higher Education IAP program. State Fair Community College, Mineral Area Community College, and East Central Community College were assisted in the writing and submitting of Title III Higher Education Proposals.

There are 26 districts in Missouri which have adopted the Comprehensive School Mathematics Program. McREL also donated the entire CSMP library to the University of Missouri.

Strategic Planning was done collaboratively with the Secretary's Chapter One Initiative in the study of exemplary projects.

McREL conducted an Exemplary High School Conference in Kansas City featuring 24 school districts from 11 states.

Workshops were conducted in Higher Order Thinking Skills and Strategic Planning in St. Louis for the Parkway School District.

McREL completed the research portion of a Secretary's Initiative study in Missouri; identified characteristics associated with effective Chapter 1 reading programs.

McREL also co-sponsored a conference, "Educational Excellence: New Demands--New Solutions" with the Missouri State Department of Elementary and Secondary Education and Harris Stowe College, St. Louis, Missouri.

Relevant Information From Other States:

McREL conducts similar work to that described above in its six other states: Selected projects from these other states that might be of interest in Missouri include:

- The development of local and state agencies, including school boards, in strategic planning processes that examine the needs for improvement geared to the changing society.
- The state-wide implementation of the Effective Schools Program through regional service agencies.
- A policy examination of the viability of regional service agencies.
- A staff development program dealing with "Mainstreaming".
- Technical assistance to study groups and commissions responding to the National Commission Report.

NEBRASKA

Briefing Information:

The Mid-continent Regional Educational Laboratory (McREL), serves seven mid-western and Rocky Mountain States (CO, KS, MO, NE, ND, SD, WY). McREL's primary funding agent is the National Institute of Education, part of the Department of Education. Our central focus is school improvement with services to state education agencies, local school districts, professional organizations, and institutions of higher education. McREL's activities include: research, development, dissemination, training and technical assistance.

Activities of the Mid-continent Regional Educational Laboratory in Nebraska over the past five years include these:

Rural Education

McREL co-sponsored for two years the University of Nebraska's summer workshop for rural educators. The sessions were aimed at providing professional development for rural teachers and administrators in topics unique to their needs. McREL also co-sponsored a Rural Education Seminar with Kearney State College. It was designed to assist in developing the Center for Rural Education and Small Schools.

McREL assisted in the development and facilitation of two cluster activities, each of which involves four districts, Kearney State College and the State Department of Education. One cluster, "Project Innovative Curriculum," is a cooperative curriculum development effort involving 108 Teachers and Administrators with assistance being provided by a core of consultants from the college and the State Department. Curriculum is being developed for all content areas and all grade levels.

The second cluster is a joint planning effort which will serve as the basis for making better use of the financial and human resources of the four districts to enrich and expand the instructional offerings to students attending those schools.

McREL conducted a study in Nebraska and commissioned a report, "Information Technologies: Alternative Delivery Systems for Rural Schools." Copies have been distributed at state-wide meetings. McREL staff serves on the advisory committee of the Kearney State Rural Education Center and has been asked to assist with the Sharing Task Force of LB994.

School Improvement

In Nebraska, McREL's detailed study of the ways schools use tests to evaluate student progress revealed that standardized achievement tests are not used frequently to improve instruction. Most schools do not have a comprehensive evaluation program. Data from this study has been used by a statewide Nebraska "Task Force on Quality Education" to identify directions for the State Board of Education to take to improve schools.

Other school improvement efforts in Nebraska include providing school improvement sessions, plus follow-up with schools, and for Nebraska's "Classroom Update," a series of regional conferences in the state was held.

McREL also designed a program to train field staff of the State Department of Education and 13 Educational Service Units (ESU) to implement the McREL Effective Schools Program (ESP) across the state. Nebraska staff development personnel are now delivering the ESP in over thirty school districts with on-site support from McREL staff.

Training has been conducted in McREL's Effective Schools Program for 300 teachers and principals in Omaha.

McREL has been working with the Deans at Kearney State and the University of Nebraska-Lincoln to plan a strategy for faculty development.

McREL has provided technical assistance for UNL faculty on time management and engagement.

State Policy Activities Conducted With or For the Nebraska State Department of Education.

McREL has been involved in several activities for the State Department of Education. A state-wide conference on minimum competency testing was sponsored by McREL. The results of the conference assisted the State Legislature in making decisions regarding state-wide minimum competency testing. McREL made presentations to the Governor's Task Force on Quality Education.

McREL has conducted Strategic Planning sessions in Westside and Millard. Strategic Planning sessions are also planned for the State Board of Education.

Other Relevant Information:

Several Nebraska individuals have been supported by McREL's regional internship program.

Nebraska is represented on McREL's governing board by Mr. John Prasch and Mrs. Virginia Vieregg.

McREL staff made a presentation to 70 teachers and administrators on Higher Order Thinking Skills in Gering as well as a workshop on the same topic in Lincoln.

Seven Nebraska school districts use McREL's Comprehensive School Mathematics Program.

General School Improvement presentations have been made at conferences and conventions such as the Nebraska School Administrators Associations.

Relevant Information From Other States

McREL conducts similar work to that described above in its six other states. Selected projects from these other states that might be of interest in Nebraska include:

- The development of local and state agencies, including school boards, in strategic planning processes that examine the needs for improvement geared to the changing society.
- The state-wide implementation of the Effective Schools Program through regional service agencies.
- A policy examination of the viability of regional service agencies.
- A staff development program dealing with "Mainstreaming."
- Technical assistance to study groups and commissions responding to the National Commission Report.

NORTH DAKOTA

Briefing Information:

The Mid-continent Regional Educational Laboratory (McREL), serves seven mid-western and Rocky Mountain States (CO, KS, MO, NE, ND, SD, WY). McREL's primary funding agent is the National Institute of Education, part of the Department of Education. Our central focus is school improvement with services to state education agencies, local school districts, professional organizations, and institutions of higher education. McREL's activities include: research, development, dissemination, training and technical assistance.

Activities of the Mid-continent Regional Educational Laboratory in North Dakota over the past five years include these:

Rural Education

McREL has conducted mainstreaming workshops which focus on teachers' needs as they try to integrate a child with special needs into the regular classroom. The program has been adopted for use by the Rural Teachers' Network. Seven case studies on small, rural schools have also been conducted by McREL in conjunction with the University of North Dakota. The results of these studies was published as a special issue of North Dakota Journal of Education.

A follow-up activity to the rural school study involves the University of North Dakota, the office of the County Superintendent and 16 districts in Walsh and Pembina Counties in planning for the establishment of cooperative programs to address study recommendations.

McREL supported/assisted with a study of the County Superintendency which has resulted in proposed legislation to phase out the office and replace it with a network of area service agencies.

As a part of the rural education effort, McREL has supported a National Conference on Adolescents at the University of North Dakota. McREL staff have also worked with pilot sites to explore the Rural School/Community Development Partnership Concept, as well as taught courses for the Rural Teachers' Networks. Additionally, McREL has provided assistance to the University of North Dakota to conduct a mathematics and science institute for teachers and students from small, rural schools. McREL assisted the Department of Public Instruction in securing a grant to further explore school/community development.

State Policy Activities Conducted With or For the North Dakota Department of Public Instruction

At the request of the Chief State School Officer, McREL has conducted two state-wide public attitude surveys toward education. McREL also assisted the Department of Public Instruction in designing a computer education policy.

Other Relevant Information:

Several North Dakota individuals have been supported by McREL's regional internship program.

Nebraska is represented on McREL's governing board by Dr. Vito Perrone, University of North Dakota. Previous board members included Mr. Dan Jerome, Administrator, Turtle Mountain Community Schools and Mr. Steven Swiontek, Assistant Personnel Director, Gate City Savings and Loan.

McREL donated to the North Dakota Humanities Council the "Humanities Experience: The Subject is You" (a traveling exhibition sponsored by McREL. It has been visited by more than 3,000 students and 300 teachers in and around Bismarck.

McREL staff have made major presentations at state superintendent's leadership conferences.

McREL has worked with State Vocational Education personnel.

McREL has designed a Chapter One Parent Training Program and conducted community and parent training at Turtle Mountain.

McREL conducted evaluation for "Each Student Is Special Project" and conducted training sessions for teachers and administrators of participating schools.

Relevant Information From Other States

McREL conducts similar work to that described above in its six other states. Selected projects from these other states that might be of interest in North Dakota include:

- The development of local and state agencies, including school boards, in strategic planning processes that examine the needs for improvement geared to the changing society.
- The state-wide implementation of the Effective Schools Program through regional service agencies.
- A policy examination of the viability of regional service agencies.
- A staff development program dealing with "Mainstreaming".
- Technical assistance to study groups and commissions responding to the National Commission Report.

Briefing Information:

The Mid-continent Regional Educational Laboratory serves seven mid-western and Rocky Moutain States (MO, NE, KS, SD, ND, WY, CO). It is funded by the National Institute of Education, part of the Department of Education. Its services include: research, development, dissemination, training, and technical assistance.

Activities of the Mid-continent Regional Educational Activities in South Dakota over the past five years include these:

Rural Education:

McREL is working with South Dakota State University, six small schools, and the State Department of Elementary and Secondary Education to explore alternative organizational and instructional strategies for small schools. The project has piloted strategies for staff development, resource exchange and community development. Studies on rural education have also been conducted in conjunction with the staff of the University of South Dakota. The results of these efforts have been disseminated to rural projects in other states served by McREL.

As part part of this rural education effort, McREL has held or participated in several state-wide conferences and workshops on the needs of rural schools including a workshop at Black Hills State College.

School Improvement:

McREL conducted a study of educational practices in a sample of South Dakota Schools during 1979-80. That study led to the development of McREL's Effective Schools Program which has been widely used. The program was piloted in eleven South Dakota districts including Rapid City, Douglas County, Shannon County, Centerville, Lennox, Mitchell, and Fort Pierre. A later version of the program has been used extensively in Sioux Falls for the past two years. Follow-up work has also occured in Rapid City. The program is now in its final developmental stage and is being implemented statewide in Nebraska and Iowa. The manuals and materials from the program will be available for widespread use duing the 1985-86 school year. The program improves time-on-task and achievement on standardized tests.

Elements of the program have been used in workshops on conferences held in cooperation with the South Dakota School Administrators Association.

State Policy Activites Conducted with or for the Department of Elementary and Secondary Education (DESE).

At the request of a former chief state school officer McREL conducted a study of public knowledge of and reaction to South Dakota's state-wide property tax relief initiative --the "Dakota proposition." The study demonstrated that over the past decade public expenditures for "basic skills" instruction have declined in real dollars; increases have tended to come in areas beyond the control of local boards of education --such as in the provision of special education programs, student transportation and energy costs. The results of the study were used by many local superintendents and school boards to increase public understanding about the impact of the initiative o education.

McREL has participated in DESE examinations of its technology policies and in the potential for using technology to reach rural schools.

McREL wrote and supported DESE's initial "State Capacity Building Project" funded by NIE. The evaluation work for this project was subcontracted by McREL to the University of South Dakota.

McREL used elements of its "Effective Schools Preogram" to support DESE's Title II (Chapter II) school improvement effort.

Future and Ongoing work:

McREL is currently designing a state-wide administrator training program for DESE; the intention is to involve the school administrators association and the University of South Dakota in the planning process.

McREL is currently planning a school improvement initiative with one of South Dakota's regional cooperatives.

Other relevant information:

Several individuals have been supported by McREL regional internship program.

South Dakota is represented on McREL's governing board by Dr. Janice Ebersdorfer, USD and Dr. James Hansen, DESE.

Relevant Information from other States:

McREL conducts similar work to that described above in its six other states: Selected projects from these other states that might be of interest in South Dakota include:

- The development of local and state agencies, including school boards, in strategic planning processes that examine the needs for improvements geared to the changing society.

- The state-wide implementation of the Effective Schools Program through regional service agencies.

- A policy examination of the viability of regional service agencies.

- A staff development program dealing with "mainstreaming."

- Technical assistance to study groups and commissions responding to the National Commission Report.

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This is how McREL has served . . .

WYOMING

- o In Wyoming, McREL was instrumental in bringing about the cooperation of the State Department of Education, The Wyoming Education Association, and Wyoming University to develop a state-wide teacher center. McREL is now providing technical assistance to that center.
- o McREL has provided training to Wyoming's Title II, Basic Skills grantee from the School Improvement Workshop. Other training was provided to a Chapter I Conference.
- o Assisted the University of Wyoming and the Rocky Mountain Research Association in support for their conferences.
- o Has conducted training in Lovell, Star Valley, Gillete, and Wheatland.
- o Has conducted Teacher Center Summer Institutes.
- o Has conducted Time on Task training for the University of Wyoming educational administration faculty.
- o Worked with equity task force on providing equal opportunities for students who attend small rural schools.
- o Two districts in Wyoming have adopted CSMP.
- o Provided assistance to the Wyoming Quality Schools Task Force.

APPENDIX E.

Press Clippings

MONDAY, OCTOBER 29, 1984 LINCOLN, NE JOURNAL

Rural schools can improve with teamwork — official

By Jack Kennedy
Journal Writer

MANHATTAN, Kan. — To improve quality, rural schools in Nebraska and elsewhere must work together, says Paul Nachtigal of the Mid-Continent Regional Educational Laboratory, based in Denver.

Some Nebraska schools already have begun to demonstrate that state mandates to teach more subjects or raise graduation requirements can be met by cooperation, not state Department of Education regulations, hefty budget increases or district mergers, Nachtigal said in an interview during a regional conference on rural education at Kansas State University here.

He cited a group of schools near Grand Island, including Doniphan, Kenesaw, Trumbull and Giltner, and another group which includes Marquette, Polk, Benedict and Hordville as examples of how cooperation may keep the forced consolidation wolf away from the door of small schools.

Working with Evelyn Lavaty of the Nebraska Department of Education and Kearney State College, the schools are learning how to share staffs and scarce resources without losing their identity, Nachtigal said.

Nebraska has more than 900 separate school districts. "That's just ridiculous," Nachtigal said.

Small schools are often "the key to the economic health of small communities," he said. "Schools do more than educate children."

But, "A Nation at Risk" and other state or national studies often ignore rural schools and communities, Nachtigal said. Some educators are concerned that the reports' push for quality and courses that rural schools cannot deliver will force them to close, or to focus their improvement efforts only on students who go on to college, and forget the rest, Nachtigal said.

The Nebraska groups of schools which are now forming, and others in Midwestern states, can become models for other states, he said. "You've got some small schools talking to each other, really talking."

The new networks of sharing schools may prove that it is more important to find ways to get information to students and teachers where they are than to bus students to bigger schools, Nachtigal said.

One of those ways to share was outlined by Milan Wall, education consultant and Lincoln Board of Education member. Wall and others noted the flexibility which small computers give rural schools. Several Nebraska schools already are tied together on a computer network through the state education department.

Some schools approach the cluster or sharing idea warily, Nachtigal said. They fear that state education departments or cooperating colleges like Kearney State are attempting to dictate to them, he said.

But, there are advantages for the cooperating colleges and agencies, in that "they can find out what life is really like in rural schools," and how their problems differ from those in urban areas, Nachtigal said.

Rural schools must be willing to try new ideas, Nachtigal said. Nebraska's new LB994 omnibus education bill is a good vehicle, he said, since it encourages sharing among schools and flexible use of the 1,080-hour school year.

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ght a 15% response and it was
able to the format with most using
ocial studies.' Since then it has settl-
ostly in the Colorado unit in many
ols.
e second edition was devoted to the
ock industry and the Nationa
ern Stock Show provided funds for

rming in the City was featured in
hird edition issued in the spring of
. The Teacher's Guide said: "This
on of the **Colorado Reader** gives
entary students a brief overview of
and water resources in Colorado.
relationship of soil and water to
, to the quality of life in cities; and
mportance of maintaining produc-
farms near cities is also discussed.
paper highlights Cunningham
entary's successful 'Garden and
ogy Project,' and contains sugges-
for classroom activities, plus
es and puzzles on the back page."
ningham Elementary School is in
Cherry Hills School District right
to Denver.
e fourth edition, published in the
of 1983, was "All About Wheat." It
the story of Colorado wheat and in-
es a map of where it is grown in
rado as well as a map of countries
h are America's biggest wheat
omers. There is a recipe for whole
at quick bread and other informa-
in the material given for the
hers.

ailable for
dation

over 7000 teachers and administrators
n-campus seminars and off-campus
country's basic underlying principles
Opportunities to visit many historical
abundant.
ed college or university. Scholarships
Valley Forge for early applicants.
a shelf of useful reference materials.
some scholarship funds available to

e offered this summer are:
hia July 8 - 15
hia August 5 - 12
are Valley August 12 - 17

June 24 - July 1

lissions July 22 - 28

June 18 - 29
July 15 - 20
July 1 - 6
8 - 13
July 22 - 27

Creek-Victor schools study new curriculum

By Monica Martin,
reporter, Ute Pass Courier

The Cripple Creek-Victor School District Re-1 staff and administration took a look at the 21st Century Jan. 20.

They met with educational research specialist Robert Ewy, in Cripple Creek to discuss and mold curriculum development for the more than 300-student school district.

Ewy, a former director of basics skills for the Colorado State Department of Education, and two administrators assisted the staff in setting goals and curriculum development. This process began in August.

Mid-Continental Regional Educational Lab, as McCreal, and Northwest Lab are coordinating the effort with Ewy. The nationwide studies are applied to the Cripple Creek situation.

The plan was made possible by a $3,100 curriculum development grant from the state department.

"If we had an ideal curriculum in the Cripple Creek-Victor School district what would it look like," Ewy questioned the staff.

"The goal is to have an articulated curriculum which is academically relevant for the district."

Statistics and info ation were used from a Summer of ijor Reports on Education packet. Th studies used included the "National Committee on excellence in Education survey which has brought attention to the learning standards of today.

The study recommended basic subjects like mathematics, science and English be more fully stressed for high school graduation requirements.

That study and others used indicated the future of education lies in computer science, foreign language and technology.

School superintendent Clifford Young agreed with Ewy and the studies used. With the reports and national goals changing, these subjects will be educationally necessary for the future, he said.

With that information and Megatrends research on national and global trends by Mike Annison, the group set many broad criteria. They discussed in individual groups curriculum, implications of higher order thinking skills, learning trends, technology organization plans, teaching structures, and national report recommendations.

Increases in requirements for math, science, computer skills and foreign lan- [illegible] consistent program kindergarten to high school were also labeled necessary.

The meeting marks another stride in the program to develop curriculum, Young said.

"I think we made strides in setting our direction," Young said. "Our staff did well in establishing their future educational goals. "Now it's going to be a matter of getting all the facts and research together to develop a 21st Century curriculum if we can."

The staff, with the cooperation of administration and school board, will be meeting approximately one day monthly until the 1983-84 year ends to develop their curriculum and educational program and goals.

Wheat Ridge band wins Sousa award

The Wheat Ridge Senior High School band, directed by Larry Wallace, is one of six bands in the nation to receive the 1983 "Sousa Flag of Honor." The award honors high school band programs that have demonstrated significant excellence in concert activities over a period of several years.

Winning bands must have achieved and maintained high standards of excellence in the concert area; been evaluated by experts or rated "superior" in state, national or international concert activities; and offered a complete and balanced program of musical activities including concert, solo-ensemble and marching bands.

The award is administered by the John Philip Sousa Foundation, a publicly supported educational foundation for the purpose of supporting excellence of bands and band music throughout the world. The award is sponsored by the Louis Sudler Foundation.

The six winners were selected from 152 nominations. Other winners are: Alice High School band, Alice, TX; Bell High School band, Hurst, TX; Georgetown High School band, Georgetown, TX; North Hills High School band, Pittsburgh, PA; and Richardson High School band, Richardson, TX.

Winning schools receive the 4 by 6 feet flag of honor, mounted on a gold standard. Each student in the present band

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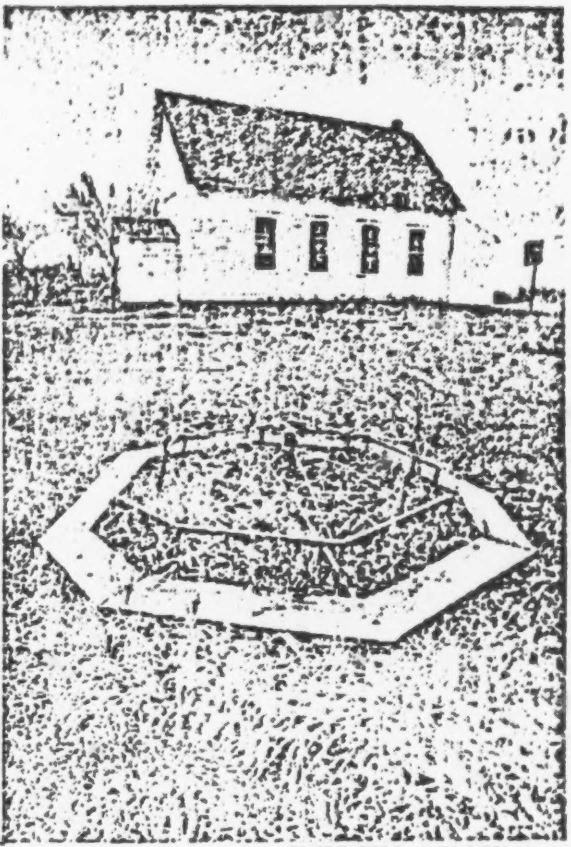
Rural schools meeting set

The new 100-member Nebraska Rural Community Schools Association, led by Meridian Superintendent Jim Allen, will meet in Omaha on Nov. 14 to support proposals to put all rural elementary schools in K-12 districts and require that all counties join regional service units.

Joint education efforts by smaller schools are becoming more frequent. Kearney State College and the state Department of Education are helping the Giltner, Harvard, Kenesaw and Trumbull schools sharpen curriculum goals and teaching in basic subjects. They still can use their own separate techniques, Trumbull Superintendent Frank Shaughnessy said, but may choose later to share staff members or materials.

Other schools in Nebraska practice joint purchasing or staff training, form computer networks, share a foreign-language teacher with two nearby districts or work on joint projects through the Mid-Continent Regional Educational Laboratory in Denver.

Also, ~~Nebraska and~~ several other states have formed rural school centers through colleges and universities to help small schools without dictating to them.



STAFF PHOTO BY HARALD DREIMANIS

There are no students at the Pioneer District 61 school about 20 miles south of Lincoln. Rural educators say their schools are entering a new era of cooperation and innovation.

Lincoln - Sunday Journal & Star
11-4-84

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TUESDAY OCTOBER 30 1984 LINCOLN NE JOURNAL

Rural conference hears Wymore Southern plan

Educator: 'Shake, bake approach' doesn't improve teacher training

By Jack Kennedy
Journal Writer

MANHATTAN, Kan. — The Wymore Southern (Neb.)-school district found out that it could improve the training of teachers without spending massive amounts of money, says the district's former administrator.

Myron Ballain says teachers don't see themselves as leaders and feel trapped in their classrooms because of the way most districts try to improve the quality of their teachers. Ballain spoke to rural school administrators attending a Kansas State University conference here Tuesday.

'Pretty conservative'

The school board members at Wymore Southern are "pretty conservative folks," Ballain said, but they realized that using one-shot outside experts who have "shake-and-bake approaches" and pull "all the magic answers from a bag of tricks" was not really improving teaching or setting long-range goals for the district, which covers 110 square miles and has about 600 students.

After the solo appearance by the visiting expert at the first of the year, "everyone comes out feeling bubbly," then promptly forgets what he or she said, Ballain said.

Instead, five years ago, Wymore Southern decided it wanted to do more than listen to a speaker on opening day and call it staff development, Ballain said. The district discovered that by using resources in the area, such as an English teacher in a neighboring district, small or rural schools can improve without spending much of their already tight budgets.

Long-term approach

Wymore Southern also decided to take a more serious long-term approach to teacher improvement, he said.

As a result a teacher involvement plan was developed whereby the teachers jointly developed a sequential curriculum plan, public relations and communications effort, improved courses and other approaches by working together, Ballain said. The plans were drawn up only after they listened to parents, students and others in the community, Ballain said.

By getting the teachers involved in the process, Wymore Southern is "miles and miles ahead" of most other small school districts which think they don't have the local resources to improve, Ballain said.

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November 4, 1984----Sunday Journal Star

Rural schools' fears still hinder improvement efforts

Jack
Kennedy

Education

"What are we going to do with our legislature?" a rural superintendent asked during the recent rural education conference at Kansas State University.

"They want to shut down schools."

That fear — that any consolidation of school districts will mean mandatory closings — has long been a stumbling block to school improvement and fairer financing formulas in Nebraska, state Education Commissioner Joe Lutjeharms said.

Nebraska had 992 school districts in the 1983-84 school year; 643 of them are small, rural kindergarten-through-eighth-grade schools. The large number of small schools hinders efforts in Nebraska to provide the financing needed to give students an equal opportunity for a good education regardless of where they live, Lutjeharms said.

Inadequate financing

"Education is a state responsibility, under the Constitution," he said. But as long as there are "pockets of poverty" in small districts with inadequate financing, Lutjeharms said, Nebraska won't be able to equalize school expenditures and devise a sound, fair school financing formula.

If all rural elementary-only schools were joined with existing kindergarten-through-high-school districts, Lutjeharms said, it would be much easier to encourage teachers and administrators to work together to improve the curriculum, building upon the cooperative efforts already under way. The total number of school districts would drop to about 250.

If several adjacent schools had few students but needed to offer more courses to aid students or satisfy new state regulations, Lutjeharms said, they could share courses and staff members.

"I'm not concerned about size," Lutjeharms said. There's no argument about largeness (being better) that holds water." But small schools do need a broader tax base, a fairer state-aid distribution formula and other financial inducements to pay teachers more and expand the curriculum, Lutjeharms said.

Joining a larger district doesn't necessarily lead to closing a school building, Lutjeharms said, as is commonly believed.

"I have no desire to close schools," he said. The decision on closing still could be left to a vote of local school patrons, the commissioner suggested.

Although Lutjeharms and his state education department colleagues in other states say they are trying to help rural schools without dictating to them or squelching local control, many educators at the KSU conference are still wary of state or federal bureaucrats and policy-makers.

Communities served

In South Dakota, 742 schools enroll 150 children or less, said Tom Moriarty of the University of South Dakota. "Schools not only serve the kids, they serve the community," he said, but advocates of school closings often forget that.

In a survey of Nebraska and several other states that Moriarty conducted, small-school administrators said that state policies hinder rather than help their efforts to improve schools. "We've got a helluva mess on our hands, trying to develop a school system with policies that throttle us," he said.

Moriarty said he isn't worried that some small, underfinanced rural schools with a limited curriculum may not be adequately preparing their brightest students.

Those promising students don't need extra help, he said. "They'll make it anyway."

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Rural schools urged to unite for excellence

By Jack Kennedy

MANHATTAN, Kan. — Paul Pearson gets excited when he talks about SOS, the new Small Organized Schools group he heads in North Dakota.

"Our legislature is really moving toward controlling small schools. It's time we get organized," said Pearson, who is superintendent at Sherwood, two miles south of Canada, and nearby Antler.

Urban and rural schools face similar problems, he said: busing for long distances, the effects of school closings on a community, tight budgets. "I wish we could sit down and discuss them instead of fighting each other," he said.

Pearson and other educators were in Manhattan to attend a Kansas State University regional conference on rural schools.

Antler and Sherwood are 16 miles apart. Their total enrollment is about 400, but they have a computer for every five students, high test scores and small classes.

Reflected

Pearson's uncertainty, protectionism and fear of being forced to close or meet higher state-ordered standards was reflected during the four-day conference by officials, teachers and school board members from several states, including Nebraska.

Typical of the problems is the inability to determine precisely what rural means. Some say it means "anything below 1,300 people, by federal definition." Others called it "anything outside Wichita or Omaha."

They came to the conference seeking ways to keep their students, their schools, their lifestyles and, perhaps, their jobs. The answers often were in short words with creative definitions, such as "cluster" and "network." There was little talk about tax lids and tight money, but financial problems do help motivate the new voluntary-cooperation mood.

Seldom heard

The words "merger" or "consolidation" seldom were heard, although both remain a concern. Kansas, for example, had more than 1,000 school districts in 1961 before a new state law brought reorganization. The state now has 306 districts, a third of Nebraska's total. Any further decrease will be due to financial or curriculum pressures, not state laws, said Kansas Education Commissioner Harold Blackburn, a former U.S. Department of Education regional commissioner.

Blackburn, a Presbyterian minister's son who attended grade school and junior high in Wymore, Neb., praised Nebraska's Educational Television Network as one way to reach rural students. Small schools can improve their quality and meet new state requirements without merging, Blackburn said.

He graduated from a 100-student Kansas high school. His children graduated from Shawnee Mission West, an affluent 1,600-student school that had many more courses. Large districts may be more efficient, he and others said, but they are not necessarily better.

See SCHOOLS on page 10E

From page 9E

Schools

Probably over

Nationwide, the school consolidation movement probably is finished, said Walt Turner of the American Association of School Administrators in Washington, D.C., and the new cooperative mood seems to have taken its place.

Rural America was ignored in the National Commission on Excellence report "A Nation at Risk," which fueled the current school reform movement, he noted, adding that Washington politicians and bureaucrats probably do not know that a third of all U.S. students are in small or rural schools. As a result, if anyone is to improve rural schools, he said, it must be educators themselves.

Turner, a longtime advocate of voluntary cooperation through such efforts as Nebraska's educational service units, urged the rural educators to "forget the turf. Forget the jealousies that you've had over the years. You have to look beyond your local district. You have to help your neighbor."

Some already are forming their own clusters or networks, and even are attracting big-city folks to run them to improve quality. And they are improving quality not just because it is federally or state required, as with Nebraska's LB994, which requires additional courses. Many students already take more than is required in small schools, administrators note.

Tommy Tomlinson of Washington, D.C., research director for "A Nation at Risk," said small schools teach the basics well.

But Tomlinson, a 1949 graduate of Wamego High School near Topeka, said his education was like a small economy car: "It got me there, but it wasn't very flashy." A broader, more challenging curriculum "could have gotten me there a lot sooner," said Tomlinson, a senior associate at the National Institute of Educaton.

Rural educators said they will find those ways to improve without state or federal orders.

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Mullen super tuned to excellence band

A broad, anticipatory smile crossed Bob Mandeville's face as he drove through northern Kansas en route from a rural education conference in Manhattan to a motel near Lincoln.

He had left the meeting at Kansas State University early to make sure Mullen's eight-man football team was ready to put its 8-1 record on the line against Adams' 9-0 squad in the high school football playoffs Wednesday.

He would like to see his boys win, the Mullen school superintendent said. But the playoffs mean more than winning, he said, just as the Sandhills is more than beauty, serenity and isolation. The team knew it had a chance, and that's the main thing.

Thirty-four of the 35 high school boys are on the team, and the whole squad would be there. They made a seventh-grader the team manager, and "he's really pumped up" by the recognition and responsibility, Mandeville said.

Being attuned to his school's and the community's needs is Mandeville's strength. A detailed presentation on public relations drew a big crowd at the Manhattan meeting, for example, but the Mullen superintendent has his own simple, effective technique.

A few words from him during his morning coffee stop in the Mullen cafe usually find their way around the district rapidly, he said. He also takes his own pictures of school events for the Mullen paper.

After 21 years, he knows the shortcomings of rural schools. His sprawling district covers more than 1,000 square miles. Some students board the bus at 6:20 a.m. so they can get to school by 8. Like many rural students, some save icy drives during the winter by living in town.

He would like to have a marching band, he said, but there just aren't enough students when all of the boys in the 100-student school play football instead of sax or trumpet.

When you're in Mandeville's shoes and you're trying to raise school standards, you try some creative solutions.

Mid-Plains Community College teaches some college-level courses at Mullen High School, day and night. Several of his students have six college credit hours when they graduate, Mandeville said. Many exceed the 200 hours the state requires for graduation credits.

A student who wants a course Mullen cannot offer is encouraged to take it by correspondence through the University of Nebraska's worldwide extension high school or through the University of Missouri.

Correspondence courses don't give students human contact, however. Mandeville wishes Mid-Plains could teach courses in Mullen for high school credit, not just college hours, but this would require changes in teacher certification laws and other regulations.

For three years a Mullen garage owner and other business people offered on-the-job vocational training. It was too limited, so five years ago the students helped build a separate industrial arts building for $90,000.

Mandeville added a science teacher before the state raised science requirements this year because he knew the students needed a broader range of offerings. The new standards will cause him to add another teacher so he can offer psychology and sociology, Mandeville said, and he is concerned about a requirement that all schools must teach second- and third-year foreign-language courses even if no one signs up for them.

Winning is seldom easy for small schools, but Mandeville is proud of how the game is going.

Lincoln Sunday Journal & Star 11-4-84

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Englewood School News

A Step Ahead

A newsletter from your public schools

November 1984

'Strategic Vision' statements to be reviewed, studied

The Englewood Board of Education has established an informal process to receive reaction to the district's initial "Strategic Vision" which has been developed over several months.

The school board has become concerned about preparing students of the Information Age for the 21st Century. Working with Mid-Continent Regional Education Laboratory, the board and district administration sought community involvement in the development of a plan to assure educational excellence in the future.

Several board forums have been held over the past few months to inform interested citizens and administrators about the concept of future planning. Work sessions have been held in an effort to develop basic vision statements which could be incorporated into a major "Strategic Vision" plan.

The school board has decided to approach the remaining work, which must be done before the plan can be finalized, into two major areas: faculties and school advisory groups will be asked to review the vision statements; and, secondly, the 2002 Planning Committee will work toward the formation of vision statement study groups.

The School Improvement Committee will also be asked to assist the 2002 Planning Committee with one of the five identified vision statements.

District personnel and community leaders who become involved in the review and study group stage of the strategic plan will read recommended materials which focus on educational planning for the future.

Those who are interested - including parents, students, community groups, or staff - in either reviewing the vision statements or becoming directly involved in a study group should contact Gary Dounay, chairman of the 2002 Planning Committee, at 761-4021.

Strategic visions for Englewood Schools by 1990 are:

- Englewood's educational programs should be highly personalized.
- The curriculum should be based on a highly efficient focus on mastery of the basic skills of communication and computation. The curriculum stresses interdisciplinary problem-solving activities that include programs of study in creativity, information access and utilization, personal productivity, economics and global understanding.
- Graduation requirements should be stated in terms of demonstrated achievement, outcomes.
- The district should be recognized as a center of educational excellence for all community populations.
- The district should develop and support the profession of teaching so that teaching will be viewed as a prestigious career contributing essential services to the total community.

Englewood parent cited for volunteerism

Nancy Bert, volunteer with the Englewood Schools.

Ask Nancy Bert why she has volunteered over 10,000 hours to the Englewood Schools in the past ten years and she will unabashedly say it's because of the satisfaction she gets from working with children.

From working carnivals and bake sales to talent shows and field trips, Mrs. Bert has probably done just about every volunteer task imagineable. Recently, she was honored by Gov. Dick Lamm in the sixth annual Governor's/State Board of Education's School Volunteer of the Year program.

Her volunteer career began two days after her only child, Kevin, entered kindergarten at Cherrelyn Elementary School. When he went on to Sinclair Middle School, the answer to the question about which school should win her volunteer efforts was answered easily. She simply began to work at both schools.

When her son went on to Englewood High School, Mrs. Bert found herself volunteering at that school as well.

She has been involved in local advisory groups at the building level and is currently serving on several district-wide committees.

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Vol. 4, No. 1 Unified School District 465—Winfield, Kansas 67156 January, 1985

Workshops On "The Effective School Program" Are Being Held

In May of 1984 the Board of Education of USD 465 approved the recommendation of the school administrators to enter into Mid-Continent Regional Educational Effective School Program. The laboratory has developed a program of activities which helped educators use the research findings in education to improve the performance of teachers, administrators and students.

Two workshops have been held. Two more are scheduled for January 28 and March 5. The workshops are conducted by the leaders from the educational laboratory. Some thirty staff members of the school district are involved. Following is an account of one participant's reaction to the Effective School Program.

MIKE FELL — Art teacher at 7th and 8th Grade Center.

STAFF MEMBERS at workshop included Don Gross, Vernon Goertz, Clemen Gonzales, Al Holdeman and Rita Connors.

Teachers Are Learners, Too!

By RITA CONNERS
Language Arts Teacher
7th and 8th Grade Center

I thought maybe this year I had it licked but I didn't. August rolled around and, after all these years, the same old butterflies found a home in the pit of my stomach. The giant leaps they took were hard to take when now and then thoughts would slip away and, in my mind's eye, I could see myself standing helpless and defenseless before a room full of students on the first day of school. The nagging questions are always there. How can I meet the needs of all these kids? How can I excite them about learning new things and stretching their limits? How can I spend less time on routine classroom management and increase student time on task? How can I create a climate in my classroom where they can feel comfortable? How can I emphasize academic achievement? How can I encourage positive behavior? How can my teaching be more effective? How discouraging. I just realized there is no end to the list of questions. I suppose the only comfort is in knowing I am not alone. It's the way of the teaching profession. If one cares about human beings and hopes each student can have the best chance for success, the search will go on for ways to be better, and opportunities will be taken for teacher and school effectiveness to grow.

When I learned about participating in the Effective Schools program of the Mid-Continent Regional Educational Laboratories (McRel), I had little idea about what it meant. The letter from the superintendent's office spoke of four workshops scheduled over the course of the year, included a list of the schools in the district with a team from each school (approximately thirty participants), and concluded with the thought, "I have many reasons to believe that this will be a positive experience for you and will be a benefit to the students of our district." Perhaps this was a way to be better, an opportunity to grow.

According to McRel, recent research suggests schools can be more effective than they are, more orderly and safe, more interesting and challenging, and achievement can be higher. To meet these expectations, they have constructed a program consisting of the following: an assessment process to determine a school's academic effectiveness and to identify strategies for improvement; a study for time on task; a method for focusing on leadership and group processes necessary to bring about change; a set of training and administrative activities that help teachers and administrators take steps toward developing a more effective school; and, finally, the program provides a management system for schools as they monitor the percent of time students are engaged in learning, raise expectations for students, increase staff cohesiveness and collaboration and increase academic success ratio of students.

When the workshops have been completed and the books and articles digested, the thirty people must then decide how to effectively share the information, thereby encouraging each school to develop a long term effective plan that will improve the performance of administrators, teachers and students. Hopefully, strategies for improvement can be developed and a plan of action implemented that will benefit us all.

"The superintendent was right. These sessions have already been a positive experience for me. One of the reading assignments that caught my attention for the next session deals with effectively "Beginning the School Year." I must read that article soon, but I bet it won't say a thing about butterflies.

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MPORIA GAZETTE
Wednesday, the Third Day of October, MCMLXXXIV

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CONSULTING — Susan Everson, consultant for Midcontinent Regional Education Laboratory (McREL) of Kansas City, explains the Effective Schools Plan to Emporia principals and administrators and Emporia State University professors. The meeting was held this morning at the Emporia Board of Education. The plan is intended to help educators improve Emporia's schools. (Photograph by Jeff Davis)

EMPORIA
USD 253
Fall, 1985

SCHOOL TIMES

School-Community Newsletter

Back to School

Dear Parents,

Many Emporia teachers think this school year will be the best ever. Each school has outlined a plan for school improvement, and teachers are enthused.

The plans were made last year when a selected group of teachers and administrators worked with outside consultants. They attended many meetings to study the latest research on the qualities that make the best teachers and schools.

The research shows that these qualities are pretty much the same across the country, whether the district is city or rural, large or small. The staff of each school used this research to see what their school was doing right and where they could make improvements. They will work to bring about improvements during the school year.

Good teaching is most important. Right now, teachers are refreshing their memories about the do's and don'ts of getting the school year off to a good start and setting the stage for learning. They are already using what the research shows will work.

During the year, some teachers will begin to work in small groups to improve their teaching methods. They will decide what each wishes to do to improve and will evaluate each other to increase their teaching skills.

Of course, teachers have always been evaluated by their principal, and that will continue. But when teachers work together as friends with each other's interests at heart, they should find it easier to improve. All teachers want to be a success, and now many of them will get help and support they need to achieve it.

Children, too, need support. Research shows that support from home is very important to their success in school. Parents may wish to join in school improvement. They may wish to talk with their children about what can be done at home to help them at school. It may be that children need more praise, a quiet place to do homework, less time watching television, or more visits to the library to encourage reading.

Your schools wish the students a happy and successful school year!

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METRO ROUNDUP

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Schools lay groundwork for year 2000

BY JUDY McFARLAND
Special to The Denver Post

Littleton and Englewood school officials — facing declining enrollments, shrinking resources and soaring educational demands — today are trying to peer into the future to figure what tomorrow's students will need.

Today's 3-year-olds will graduate from high school in the year 2000, officials note. They say that to ensure the schools keep pace, they must determine the space-age skills today's toddlers will need in the 21st century.

The questions bother not only Littleton, Englewood and other metro area school officials but those at the national level, too.

In Englewood, educators conducted a "2000 Forum" last week to ask parents and other participants to offer their ideas on students' future needs.

Representatives of the Mid-Continent Regional Educational Laboratory, a non-profit educational consulting group, helped run the Englewood forum. The meeting was similar to sessions taking place across the country, said Dr. Shirley McCune, Learning Trends Newsletter editor for the laboratory.

"We need to know where we need to be, where we are now, and how do we change," she said.

Littleton officials agree. Last May, the School Board appointed a large "Futures" committee, which has met monthly to try to answer the critical questions of how and what the district should provide its graduates.

The committee last fall conducted a public hearing to let district residents offer their thoughts.

The panel has considered those suggestions in its sessions.

A preliminary report with the group's suggestions should be complete late this month and may be ready for a public hearing April 11, said Dr. Gordon Brooks, the Futures Committee chairman and the district assistant superintendent for instruction.

The board will consider the group's final recommendations in May.

In Englewood, educators have to summarize their recommendations for a report to be delivered later this spring, while parent groups continue to meet.

Officials in both Englewood and Littleton are looking at incorporating more computer training in their classrooms, likely not as a specialized course but more as an aid to help youngsters improve their studies in all fields.

Educators and parents agree that increased attention must be paid to math and science courses. They have been the subject of scrutiny by a presidential committee, which presented a report called "A Nation at Risk." The study examined and found fault with the state of the nation's schools.

School officials say they're unsure how to plan students' education because the world changes so rapidly.

McCune said that current projections suggest that workers in the future will change careers — not jobs — six to eight times in their lives.

"There will be training and retraining," she said.

Dr. Ed Larsh, formerly of the U.S. Department of Education and now a staff member of the Mid-Continent Lab, said districts should consider teaching some subjects, such as English and social studies, together in a more integrated fashion to save time, space and money.

The money-saving recommendations have particular appeal in Littleton and Englewood, two communities that aren't poor but do face aging populations, declining student enrollments and limited potential for growth and development.

The two districts, like many in the state and nation, also must cope with declining state and federal aid.

In Littleton, officials in October 1983 issued a five-year forecast suggesting that student enrollment would drop from [illegible] to [illegible] by 1988. This compares with the district's 1980 enrollment of [illegible] students.

Englewood officials also have faced declining enrollment for a decade.

A January report showed that the district's student enrollment was [illegible], down 100 students from the [illegible] figure at this time last year.

Although Englewood officials have not considered bond elections to remedy financial problems caused by enrollment declines and reductions in state and federal aid, Littleton school officials are discussing a bond election on May 15.

The proposed election would raise money for needed maintenance projects, improved science rooms and computer labs. It would not involve any increase in the property tax rate, said Superintendent Robert Tschirki.

Tschirki said the election has been planned for May, when the district's financial advisers — Boettcher and Company — say interest rates will be at their lowest.

The district's staff has estimated that the schools have more than [illegible] million in needs, which the bond referendum can't possibly cover. The School Board now is trying to identify the projects the district most urgently needs to undertake.

The Denver Post / [illegible]

Frank Hammond, Englewood Schools, uses chart to explain needs

The Denver Post / [illegible]

Parents Flora Chester, left, and Marian Taylor listen to questions at the Englewood school public forum

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THE S.A.S.D.
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THE MONTHLY VOICE OF THE SCHOOL ADMINISTRATORS OF SOUTH DAKOTA
VOLUME 15 NO. 3 PIERRE, SOUTH DAKOTA MAY 1985

MANAGEMENT TRENDS

BLACK HILLS STATE COLLEGE
JUNE 12 -14, 1985

The SASD Management Trends will be offerred in cooperation with the Deapartment of Education. Three out-of-state speakers will be featured on the program.

DR. JOSEPH SCHERER, Associate Executive Director of the American Association of School Administrators, will be the keynote speaker at the First General Session on Wednesday. Dr. Scherer's topic is, PUBLIC EDUCATION: ARE WE ROMANCING THE STONE?

DR. LARRY HUTCHINS, Director of the Mid-Continent Regional Educational Lab, will present the Third General Session on Thursday morning. Dr. Hutchins will share major propositions of effective schools and what administrators must do. Larry will also present a follow-up interest session on tactics and planning for implementing the propostions.

The closing session on Friday at noon will be presented by DR. GORDON MORTRUDE from St. Cloud University. His topic, SCHOOL DISCIPLINE: A POSITIVE APPROACH FOR THE FUTURE, will be approached with a touch of humor and a dash of motivation.

Continued on p. 2

PROFESSIONAL DEVELOPMENT AWARDS

The SASD Executive Committee, upon the recommendation of the Professional Development Committee, made the decision to implement for the first time an administrative professional development awards program. Special recognition will be given to these administrators at the Joint Convention August 15-16, 1985 in Mitchell.

In order to receive the Administrator Professional Development Award (APSA), the SASD member must complete the enclosed application indicating that they have devoted no less than 60 contact hours from July 1, 1984 - June 30, 1985. The application must be sent NO LATER THAN JUNE 20, 1985 in order to be considered for the 1985 award.

DOE RULES DEVELOPMENT: SBOE MEETING JUNE 17-18,

SASD is working with the Division of Education in the development of rules necessary to implement the following areas resulting from the Legislative Session. SASD members for each Task Force are noted so that you may provide information for consideration. The draft rules will be reviewed at the State Board of Education meeting on JUNE 17-18, 1985 AT WHICH TIME PUBLIC TESTIMONY WILL BE TAKEN. Watch for further information from Secretary of Education & Cultural Affairs, Dr. James Hansen.

1. EXCELLENCE SCHOLARS IN EDUCATION
2. CAREER LADDER: SENIOR STATUS
3. EXEMPLARY ACCREDITATION LEVEL

SASD members for the above three areas are: Anderson (Lyman), Levin (SASD); plus higher education members who are also SASD members Jensen (SDSU), Oas (DSC), Sorge (NSC). Also on the task force are D. Meyers representing ASCD, Diane Miller (SDEA), and Sam Tidball (ASBSD).

4. FUND BALANCE (SB149)

SASD members are: Anderson (Lyman), Doolittle (Harding), and Lynch (Hot Springs). Also attending are Levin (SASD) and Nelson (Arlington). Other members of the task force are:

Panel in Wyoming Offers Package of School Reforms

By Cindy Currence

The Wyoming Blue Ribbon Committee on Quality Education this month recommended a school-reform package that includes increased high-school graduation requirements, higher salaries and professional standards for teachers, and more efficient use of classroom time.

"As this committee studied reports, sifted through evidence, and heard from 125 citizens across the state, it became clear that recommendations for change were in order," members of the panel said in its report, "Quality Education in the Equality State."

State Superintendent of Public Instruction Lynn Simons established the 29-member panel last year to examine the condition of public education in Wyoming. The committee includes educators, parents, public officials, and representatives of the state's business community.

Graduation Requirements

The panel recommended that requirements for high-school graduation include four years of language arts, two years of mathematics, three years of social studies, and two years of science. Graduation requirements in the state currently vary from district to district.

"These requirements should consist of a core for all students," said the report. "And as core requirements are met, alternatives should be available that broaden the students' perspectives and prepare them for later life."

For college-bound students, the committee suggested even stricter requirements, calling for an additional year of mathematics, at least one laboratory-science course, and two years of foreign-language study.

The committee also recognized vocational education as "an integral part" of the educational system but suggested that training be shifted from preparing students for an industrial society to preparing them for a technological society.

In recommending more rigorous graduation requirements, the panel called on the state legislature to adopt a law authorizing the state education department to ensure that the recommended graduation requirements are met by all school districts.

Attracting Teachers

The superintendent's committee suggested that funding for elementary and secondary education be increased to levels that would allow teachers' salaries to compete with those of professionals in private industry. But it also called for "verifiable criteria for determining [teacher] competencies."

Such criteria, the committee proposed, should include a requirement that all prospective teachers be graduates of teacher-training programs approved by the National Council for Accreditation of Teacher Education and that a temporary, one-year teaching certificate be issued for new teachers. The certificate would be renewed only if a thorough evaluation of the teacher's performance during the first year proved satisfactory.

Use of Time

Another primary concern of the panel was the need to make better use of the school day.

"To deal with this issue," committee members said in the report, "we recommend that attention be given to reducing absenteeism, time lost to out-of-school work, time off of school tasks, and to regular class time devoted to extracurricular activities."

School districts should stress time-management techniques in each school building to ensure that time spent at school is as productive as possible, the report states.

Limiting Student Employment

The committee recommended limiting student employment to a maximum of 20 hours per week. "Legislation may be necessary to limit child labor," the report added.

Superintendent Simons said that the education department will seek legislative support for those recommendations that require additional funds or new laws, and that her agency will continue its current efforts at educational reform.

The department has not arrived at a final estimate of how much additional money would be required to put the committee's proposals into effect, education officials said last week. But according to Ms. Simons, "Many of the recommendations are, in fact, projects that the department has already undertaken and we will continue with renewed vigor our school improvements under way."

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APPENDIX F.

Letters of Commendation

UNITED STATES DEPARTMENT OF EDUCATION

OFFICE OF THE ASSISTANT SECRETARY
FOR VOCATIONAL AND ADULT EDUCATION

Dr. Larry Hutchins
Midcontinent Regional Educational
Laboratory
2600 South Parker Road
Denver, Colorado

Dear Dr. Hutchins:

On behalf of the State Vocational Education Act (VEA) Guidance Supervisors, thank you for the contribution you made to the success of our National Conference on New Directions in June in Denver.

Your willingness to work with our Long Range Planning Committee without honorarium reinforces our belief that the quality of our work has long range implications for career guidance and counseling in the nation. We expect to work especially hard in the months ahead to be worthy of your investment.

Please call me at (202) 732-2431 if I can be helpful to you or the Midcontinent Laboratory in turn.

Sincerely,

Joyce Cook

Joyce Cook, Specialist
Career Guidance and Counseling

cc: Dr. Evelyn Lavaty
Guidance Supervisor
Nebraska

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ADMINISTRATION BUILDING
15955 New Halls Ferry Road, Florissant, Missouri 63031—(314) 921-4450
THOMAS J. LAWSON, SUPERINTENDENT

Hazelwood Schools

August 22, 1985

Dr. C. L. Hutchins
Executive Director
McREL
2600 South Parker Road
Suite 353
Aurora, Colorado 80014

Dear Dr. Hutchins:

Thanks for your excellent presentation today! It was timely and thought-provoking and had just the right focus I was seeking for our leadership staff.

I apologize for any confusion we may have caused you in getting to Henry VIII Hotel. We did communicate this location to your office. At least you didn't let it interfere with your program for us.

Come see us in Hazelwood sometime when you are in St. Louis and have the time. Best wishes to you and McREL.

Sincerely,

Thomas J. Lawson

Thomas J. Lawson
Superintendent

TJL/bh

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BUSINESS OFFICE
AUG [illegible] 1985

BOARD OF EDUCATION: Charles E. Sweeney, President Joseph E. Donahue, Vice President Gwendolyn L. Gerhardt, Secretary

SAN DIEGO COUNTY
OFFICE OF EDUCATION
Gerald A. Rosander, Superintendent
6401 Linda Vista Road
San Diego CA 92111-7399
(619) 292-3500

June 12, 1985

C. Larry Hutchins
Executive Director
Mid-continent Regional Educational Laboratory
2600 S. Parker Road
Bldg. 5, Suite 353
Aurora, Colorado 80014

Dear Larry,

Thank you for all the time and effort expended by you and your co-workers at Mid-continent Regional Educational Laboratory in making my visit with you beneficial. Your careful attention to our preliminary discussion was evident in each of the other interveiws. I came way feeling that my objectives of gathering information about some specific programs and projects being conducted at McREL had been met.

Thanks again for your generous donation of time and talent. Please convey my thanks to Paul and Jean. I will honor all individual promises when I return from vacation.

Sincerely,

Dorothy Smith Collins
Coordinator
Professional Information and Resource Center

DSC:dm

DETROIT PUBLIC SCHOOLS

5057 Woodward Ave.
Room 944

OFFICE OF INSTRUCTIONAL IMPROVEMENT
Detroit, Michigan 48202

(313) 494-1100

May 29, 1985

Dr. Sharon Koenigs
McREL
270 North Kirkwood, 2nd Floor South
St. Louis, MO 63122

Dear Sharon:

I want to express my commendations for a job well done in coordinating the planning for the successful Urban Education Tri-Network Conference on Higher Order Thinking Skills in St. Paul, May 19-21. Though the conference was a tri-network effort involving AEL, NCREL, and McREL, you provided the coordination to ensure that materials were prepared, consultants present, facilities arranged, and the myriad other items so essential for a meeting's success. You completed these tasks with your usual efficiency and friendly manner.

At the meeting, you received much positive feedback from Urban Education Network members, staff from other laboratories, from consultants, and other participants. I just wanted to put in writing the thanks and praise which so many of us voiced in St. Paul.

Improvements in urban education in the AEL, McREL, and NCREL regions have been stimulated and nurtured through your leadership efforts in the past. Your ongoing support of the Urban Education Network continues to contribute in important ways to fostering improvements in teaching and learning in urban schools.

Thank you for your guidance and leadership in helping to make the St. Paul meeting successful.

Sincerely,

Allen

Allen F. Zondlak, Chairman
Urban Education Network Advisory Committee

mz

cc: C. L. Hutchins

Arthur Jefferson
General Superintendent

Melvin Chapman

MISSOURI SCHOOL BOARDS ASSOCIATION

1809 Vandiver Drive, Columbia, Missouri 65202-1983 • Telephone: 314/474-[illegible] • 1-800-221-MSBA

May 7, 1985

Dr. C. L. Hutchins
McREL
21600 S. Parker Rd.
Bldg. 5, Suite 353
Aurora, CO 80014

Dear Dr. Hutchins:

I want to thank you for your excellent presentation at the recent MSBA Academy of Boardsmanship. In light of the very positive response to your presentation, I would like for you to tentatively schedule October 26, 1985 for the purpose of conducting a three-four hour workshop as a pre-convention workshop at our annual convention. I mentioned the possibility of this workshop to you at an earlier date and I hope that you will be able to make this meeting. I will certainly be glad to talk to you in more specifics about the progam itself at your convenience.

Thanks again for your support, Larry, and I am looking forward to working with you on behalf of furthering excellence in education in Missouri.

My very best personal regards.

Sincerely,

Carter

Carter D. Ward
Executive Director

CDW/kw

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NCA

Commission on Schools

North Central Association
of Colleges and Schools

Executive Director

John W. Vaughn
Commission on Schools/NCA
1540 Thirtieth Street
Post Office Box 18
Boulder, Colorado 80306-0018

Toll-Free 800/525-9517
Colorado 303/497-0261

13 October 1985

Rhonda J. Horwitz
Robert J. Marzano
Mid-Continent Regional Educational Laboratory
2600 South Parker Road
Building 5, Suite 353
Aurora CO 80014

Dear Rhonda and Robert:

The members of the Commission's Committee on Research have asked me to convey to you their appreciation for your excellent work in developing the "Study of Assessment Techniques and Underlying Constructs for the NCA Competencies."

Your comprehensive approach to the task, encompassing both the collative work and the establishing of a philosophic context, has produced a resource book that will be of inestimable value to educators.

We hope to have future occasions to make use of your exceptional talents.

Sincerely,

Meg Stanavage
Associate Executive Director

cc:
C. L. Hutchins

Wichita Public Schools U.S.D. 259
Administration Building
428 South Broadway
WICHITA, KANSAS 67202

Office of the Superintendent

January 10, 1985

Dr. C. L. Hutchins
Executive Director
Mid-Continent Regional
Educational Laboratory
2600 South Parker Road
Building 5, Suite 353
Aurora, Colorado 80014

Dear Dr. Hutchins:

Your recent visit of November 28, 1984, was most helpful in clarifying the role of McREL. Being a new superintendent in the area, I was impressed with the extension of your services. A brief review of previous services to the Wichita Public Schools, Unified School District 259, indicates that we have had an excellent relationship with the laboratory in the past.

Specifically, the service to elementary school principals and their staffs in developing school improvement has been helpful. Research on effective schools and the techniques for school improvement will have a positive effect. The consensus of those faculties served was that the service was quite helpful. Previously, McREL helped with the Center for Urban Teacher Education (CUTE). The program, designed to give student cadets an opportunity for urban and inner city teaching, was valuable to avoid cultural shock to students and to promote effective instructional techniques. McREL has acted as sponsor for the Urban Network. This network, which was designed to conduct school needs assessment, works on collaborative projects such as desegregation and basic skills and has been most valuable to Wichita. This service permitted the school district to share some of its excellence with the 20 other midwest cities in 12 states. Wichita was most active in presenting (1) its desegregation plan, (2) reading as a basic skill, and (3) school policy information. In September, 1982, an Urban Network meeting was held in Wichita to show Levy Special Education Center and the Data Processing and Computer Center. Wichita is still receiving visitors and inquiries regarding these excellent facilities and programs. Thus, we have found the professional services from McREL very useful and would hope they would continue.

The Coordination of Instruction Council indicated a request for the following educational services as we anticipate working with Mid-Continent Regional Educational Laboratory. We believe your expertise in these areas can be a prime resource to our district.

1. Provide resources for the Wichita Plan for Educational Excellence.

2. Continue and expand McREL's work with principals and teachers on School Improvement Plans.

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3. Provide assistance in securing expertise in Outcome Based Education.

4. Continue participation in the Urban Network.

5. Assist in the development of our new teacher assessment and assistance program.

Your services are greatly appreciated. We look forward to a productive future.

Sincerely yours,

Ron McIntire

Ronald G. McIntire
Superintendent of Schools

RGMcI:ms

Susan Everson

The Saturday session was excellent!!! I do not know where one could go and be informed of as much research as you shared with the Liberty group. If we can move on to implementation/utilization we will surely be able to work more effectively and successfully with our pupils.

I shall be looking forward to the remaining two sessions.

We are keeping our hopes in a positive mode for the success of you and your colleagues in your bid for a renewal of the contract for the regional laboratory. I am hopeful that the work Mary and I did was of some small use to you. In any case, we wish you a rewarding success in your efforts. We surely are pleased with the assistance our association with McRel has provided.

Best wishes as the year draws to a close and a big new year begins.

Noble E. Freden

December 2, 1984

ARTHUR L. MALLORY
Commissioner

State of Missouri
DEPARTMENT OF ELEMENTARY AND SECONDARY EDUCATION
P.O. BOX 480
JEFFERSON CITY, MISSOURI 65102

December 17, 1984

TO: Paul Nachtigal
Susan Everson
Lynn King

FROM: Richard Phillips Richard

Dear Friends,

Just a note to express our gratitude to you for the excellent workshop provided us on December 10-12, 1984. I have had feedback from most of our Supervisors and all have indicated their appreciation for the opportunity to participate in these inservice activities.

There is no doubt in my mind that the activities we are involved in reviewing the classification program and the method for the classification review will have a profound impact upon the schools in the State of Missouri. I know each of you have a host of other responsibilities and have a full time job without assuming any additional work but I do want you to know that your activities with us are greatly appreciated and will certainly have an impact on how we do our business.

I believe it would be to our advantage to try and put the information on the two workshops together in a "package" of sorts. It has been my experience in working with this group that if we can help in organizing and arranging this material in a manageable form we will have much greater utilization. My thoughts at this time are to arrange the materials we have covered in a notebook that would categorize the information we have received and also make it more accessible to refer to. Perhaps there would be other ways to pull this all together but I do feel it is important that we try to arrange this in such a manner that will allow the Supervisors greater utilization. It is so easy when obtaining information to put it together in a file and not be used as often as desirable. If you have thoughts or suggestions in how we can put this together let me know.

We will be working on the questions and getting them to the Supervisors over the Christmas holiday. Paul and I have talked about getting together in Kansas City on January 3 or 4 or the week of January 14-15. We will visit to see what date is most convenient. I would suggest that the four of us plan to get together in Kansas City sometime in February to outline the activities for the April 29, 30, May 1 workshop.

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I mentioned to the three of you that members of our staff have expressed enthusiastic interest in having a Departmentwide workshop similar to what we had last winter. If you have thoughts on items that could be addressed in this workshop and that we can perhaps schedule for May or June, let me know.

To observe the excitement and enthusiasm generated by our State Supervisors is very gratifying for me. I am very pleased with the attitude and progress of our State Supervisors. I sense that each one of us wants to do our job better and yet are frustrated by the limitations we have both internally and externally. The activities you are providing for us without a doubt created a degree of excitement for all of us.

Thanks for your efforts.

dt

cc: Larry Hutchins ✓

APPENDIX G.

Publications and Reports, 1985

TECHNICAL REPORTS, PUBLICATIONS AND DELIVERABLES TO NIE

TECHNICAL REPORTS

Equity in Rural School Finance, National Rural Education Forum, August 1985, Paul Nachtigal and John Augenblick

"The Research: What's in it for Rural School Improvement?" Report of Rural Education Conference, Manhattan, KS, September 1985, Paul Nachtigal

New Self Study to Accreditation Using Effective Schools Research, Bob Ewy for the North Central Association, 1985

PUBLICATIONS

Clustering for Rural School Improvement - A How-to Handbook for Rural Education, Paul Nachtigal (Writing in Progress, 1985)

"Teaching Concepts in Categories", Journal of Reading, 1985, Robert Marzano

A Language Interaction Approach to Teaching Thinking, ERIC, 1985, ED 252814, Robert Marzano

Selected School Effective Variables: Some Correlates That Aren't Causes, ERIC, ED 253328, Robert Marzano

Unitary Model of Cognition & Instruction in Higher Order Thinking Skills, ERIC, Robert Marzano

Theoretical Framework for an Instructional Model of HOTS, ERIC, 1984, ED 248045, Robert Marzano

"Correlates of Effective Instruction", Reading Teacher, 1984, Robert Marzano

"Teaching Basic Relationships and Patterns of Information", Australian Journal of Reading, March 1985, Robert Marzano

Criterion Reference Test: An Alternative to Standardized Test, EDUCATION, Winter 1985, Robert Marzano

Relationship Between Language Development as a Predictor of School Performance, Journal of Speech & Communication Disorders, 1985, Robert Marzano

Reading Diagnosis & Instruction: Theory Into Practice, Prentice-Hall, 1986, Robert Marzano

An Effective Schools Program and Its Results: Initial District, School, Teacher and Student Outcomes in a Participating District, Journal of Research and Development in Education, 1985, Susan T. Everson, Susan J. Scollay, Barbara Vizbara-Kessler and Mary Garcia

Administrator Development: A Description of the Role of Administrator Development in a School Effectiveness Program, paper presented at AERA, April 1985, Chicago, IL, 1985, Susan Everson

DELIVERABLES TO NIE

Summary of Computer Data Base activity, August 30, 1985

Summary of one case study of strategic planning, May 30, 1985

Model for executive training program, September 30, 1985

Interim Report on Meta-Network Activities, April 15, 1985

Project Dissemination, Final Report, November 30, 1985

Summary of Case Studies of Exemplary Shared Programs, May 1, 1985

Briefing report on Rural Applications of Technology (videotape), May 1, 1985

Summary Report on Rural Project Accomplishments and History, Draft September 30, 1985, Final November 1, 1985

Report on the Theoretical Framework for the Thinking Skills Model, January 15, 1985

Final Report of thinking skill instructional activities, August 30, 1985

Final Report on Technology, November 30, 1985

Report on Field Services, March 15, October 15, 1985

Progress Report on Refinement Activities, April 15, November 30, 1985

Revised Trainers' (Leaders) Resource Kit, October 15, 1985

Quarterly Progress Reports on Urban Activities and Accomplishments, February 15, May 15, and August 15, 1985

Final Report on Urban Activities and Accomplishments, November 30, 1985

Evaluation of the Effective Schools Program, Final Report, November 30, 1985

Final report on McREL's Impact in the Region, November 30, 1985

Research and Development Notes, Interim Report, February 28, 1985, Final Report, November 30, 1985

APPENDIX H.

Cooperative Working Agreements

Cooperative working agreements have been developed with the following agencies/organizations in the Central Region.

Colorado Department of Education
Kansas State Department of Education
Missouri State Board of Education
Nebraska Department of Education
North Dakota Department of Public Instruction
South Dakota Department of Education and Cultural Affairs
Wyoming Department of Education
E.S.U. Association for Staff Development, Holdrege, NE
University of Colorado at Denver, School of Education
Colorado State University, Office for Rural Development
Metropolitan State College (Denver) School of Education
University of Kansas, School of Education
Kansas State University, College of Education
Kansas State University, Center for Rural Education and Small Schools
University of Missouri - Columbia, College of Education
University of Nebraska - Lincoln, Teachers College
Kearney State College, School of Education
Kearney State College, Center for Rural Education and Small Schools
University of North Dakota, Center for Teaching and Learning
University of South Dakota, School of Education
South Dakota State University, Division of Education
University of Wyoming, College of Education
Colorado Education Association
Colorado Association of School Executives
Colorado Association of School Boards
United School Administrators of Kansas
Missouri Association of School Administrators
Missouri School Boards Association
Nebraska Association of School Boards
Nebraska Council of School Administrators
North Dakota Education Association
North Dakota School Boards Association
North Dakota Council of School Administrators
Associated School Boards of South Dakota
School Administrators of South Dakota
Wyoming Education Association
Wyoming Association of School Administrators
Wyoming School Boards Association
Denver Public Schools
Omaha Public Schools
Wichita Public Schools
Project IDEAL, University of North Dakota
Western Nebraska Rural Teacher Center and the Teachers' Center Network
The Institute for Educational Leadership
Education Commission of the States
Mountain West Desegregation Assistance Centers for Race and Sex,
   Weber State College
South Conejos School District RE-10

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